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TREATMENT OF SIMPLE INFLAMMATION OF THE SKIN (DERMATITIS)*

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This is an exceedingly elementary subject, but I think that its importance to the practitioner can hardly be exaggerated. You must remember that dermatology is a very large subject to know but a very small one to practise. I believe that over three hundred different skin diseases are catalogued by the Royal College of Physicians, but there is no need to be frightened by this enormous nosology. Of the whole number not more than a third are common enough to deserve description in a textbook; the remainder are merely museum specimens, and of the hundred or so more important dermatoses there are scarcely more than a dozen which really need be studied by the general practitioner.

Of the skin cases which present themselves either at the general practitioner's surgery or at the out-patient department of the hospital, 95 per cent. will be found to be cases of inflammatory diseases of the skin due to some external cause, and which can be considered as manifestations of dermatitis or eczema, or of septic infection such as impetigo or furunculosis, or of various permutations and combinations of these conditions taken together. The remaining 5 per cent. consist of scabies, alopecia areata, ulcers of the legs, tinea infections, and an occasional lichen planus, or pityriasis rosea. If you can deal with these conditions there will not be many patients whom you will have to send on to the specialist or to the hospital.

Superficial Sepsis

First of all a few words on superficial sepsis of the skin—for example, impetigo. The greatest principle in the treatment of skin diseases is to avoid all measures which may increase such inflammation as may already be present. In septic infections where antiseptic measures are necessarily called for there is much temptation to use these in too great concentration in the hope of more effectively destroying the infective agents. But it must be remembered that strong antiseptics are also powerful irritants, and therefore tend to increase inflammation. It is never possible to cure septic infection of the skin by a mass attack on the streptococcus or staphylococcus. Some of the organisms always escape, inflammation of the skin is always the result, the survivors proliferate more vigorously than ever in the serous inflammatory discharges, and the last stage of the patient is worse than the first.

Antiseptics in skin diseases must always be employed highly diluted. Some antiseptics are less irritating than others. One of the least harmful is boric acid, and some of the newer preparations, such as acriflavine and other dyes, cause very little irritation. Nevertheless the various salts of mercury are still the most popular preparations for impetigo and its developments. These must always be employed in minimal concentration in order to avoid inflammatory complications.

One of the most important factors in the treatment of septic diseases of the skin is the cleansing of the surface from accumulated discharges. This must be done gently, without wounding a tender epidermis. When dermatitis is present as a complication it is often advisable to employ oil as the cleansing medium instead of water or aqueous solution. The inflamed skin does not like water, and it must be ever remembered that almost all solutions consist of water to the extent of at least 97 per cent.

Treatment of Dermatitis or Eczema

This is probably the commonest of all skin diseases in ordinary practice. Cases, of course, vary in severity to an enormous extent. There may be a single small erythematous patch, or one may be faced with an acute generalized eruption covering nearly the whole cutaneous surface. But the first principle of treatment is always the same—that is, protection. Protection must be afforded both from all forms of friction or contact and also from the evaporation with the consequent hardening and crust formation which is always taking place on an inflamed surface. It is for these reasons that fatty substances of one sort or another are so constantly useful in the treatment of inflammatory conditions of the skin. They prevent evaporation. Of the various sorts of fatty materials available, and they may be animal or vegetable or mineral in origin, pure soft paraffin is, on the whole, the most useful, but it must be pure and free from irritating contaminations. It may be thickened with various forms of animal fat such as lanoline or lard, and in prescribing ointments it is not uncommon to add a certain proportion of starch, the function of which is to soak up any discharge which may occur from the inflamed surface.

In prescribing an ointment for dermatitis we must first consider our base, and of this soft paraffin (often called by the proprietary name vaseline) is the almost invariable starting-point. It may be thickened to some extent with lanoline and possibly with starch. With this we incorporate as a rule a salt of a heavy metal. For the moment let us assume that the only function of this last constituent is to give body and substance to our ointment. The essential characteristic of the salt employed is that it be quite devoid of irritating properties. The metal most popular for this purpose is zinc, and the salt most commonly employed is the oxide, although zinc carbonate (calamine) and zinc oleate are also not infrequently used. Bismuth (either the oxide or the carbonate) may also be used, but it has the disadvantage of being more expensive.

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A Standard Ointment

Of what, then, does our standard ointment for the treatment of dermatitis consist? A fatty base containing soft paraffin, lanoline with the addition of starch, and zinc oxide incorporated therewith. Take equal quantities of each—for example, 2 drachms—and we have the well-known Morris's paste, a very useful preparation for the purpose.

But in many cases it is unnecessary to incorporate starch in the ointment. Moreover, the presence of starch makes the ointment rather stiff and a little difficult to remove from the inflamed surface when it is necessary to do so for cleansing purposes. Omitting the starch, we can write out a still simpler prescription:

℞ Ung. zinci (*B.P.*)
Paraff. moll. ... ... āā 4 drachms.
Mitte ʒ ij.

The zinc ointment of the *British Pharmacopoeia* consists of zinc oxide, incorporated with soft paraffin and 15 per cent. animal fat added in the form of lanoline. On the whole, I think this prescription the most generally suitable for all forms of dermatitis. I certainly prescribe it most frequently myself.

Another variation of the same theme is the well-known Lassar's paste. This consists of 2 drachms of zinc oxide, 2 drachms of starch, and 4 drachms of paraffin molle, with the addition of 10 grains of salicylic acid. Salicylic acid may well be omitted in acute cases, as it may cause a certain amount of irritation, and since this paste is often rather stiff, owing to the large quantity of starch in it, some people like to soften it by the addition of a proportion of almond oil or olive oil.

Up to the present we have assumed that the zinc in these ointments is perfectly inert, and merely acts as a protective. It is not, however, perfectly certain that this is its sole function, for in a very large proportion of cases it seems to possess what one may call an actively soothing property, so that when applied to the skin it gives a sensation of much greater comfort than is imparted by the application of the base with which it is incorporated; and, on the other hand, there is a very small percentage of patients in which zinc salts appear to have an irritating effect. This is shown by an increase of irritation immediately following the application. It appears probable, therefore, that zinc is not a perfectly inert substance, but that some chemical reaction does take place when it is applied to the skin. Here may I interpolate the one restriction which I think should always be observed in its employment. Ointments containing zinc should never be applied to hairy parts, especially the scalp, for there they produce a sticky mess, and seldom act well.

Cleansing the Inflamed Skin

As was mentioned above the inflamed skin seldom bears the action of water at all well. For this reason cleansing in cases of dermatitis is a matter for serious consideration. Frequent baths and washing, and especially the use of soap, are to be avoided. Gentle wiping with cotton-wool soaked in liquid paraffin or olive oil is usually best. Cleansing must not be too vigorous. If there are unusually adherent crusts they can be left until the next time; they will loosen themselves gradually.

Curiously enough, although most practitioners are aware of the detrimental effect of water on the inflamed skin, the use of lotions is not unpopular. This is really rather absurd, for after all, as I have already said, every lotion consists of water to the extent of about 97 per cent., and hence it is illogical to expect good results from them in the treatment of eczema.

The most popular lotion of all is the well-known calamine lotion, of which there are a good many different modifications, according to the percentage of calamine, zinc oxide, lead lotion, and spirit incorporated in it, and it must be admitted that a good many cases manage to get well in spite of it. Such virtue as it has is derived from the protective deposit of calamine and zinc oxide powder which it leaves behind, and, of course, in cases where the irritation is severe, it does exercise a cooling influence, which gives the patient a certain temporary sensation of comfort. Personally, I am inclined to use it only when the eruption consists of small spots only, scattered over a wide area—for example, across the back. As a rule, in such cases it is unsatisfactory to try and cover the whole surface with a layer of ointment, and gentle dabbing with the calamine lotion gives more satisfaction. It may be remembered also that the skin of the back is often naturally rather greasy, and possibly for this reason ointments do not suit it very well.

Although water is detrimental to eczema, many patients are unwilling to forgo their daily baths. Sometimes they get quite clever in keeping one limb high and dry while they soak the rest of the body. A useful tip for minimizing deleterious effects of the bath is to cover any inflamed areas with a layer of vaseline before immersion. This will effectually protect them provided the bath is taken not above blood heat, and that the period of immersion is short.

One further point of importance to remember in the matter of cleansing is that although water may be, and is, harmful to the inflamed skin, the accumulation of discharges and organic debris is even worse. Consequently in cases of inflammatory dermatitis in the region of the anus or the perineum, careful sponging after defaecation is often to be recommended. An important aid to the maintenance of cleanliness without the excessive use of soap and water is frequent change of underclothing, daily if possible; but this is always unpopular, because it is both expensive and destructive—laundries being what they notoriously are. But it is a great luxury, and has the distinction of having been practised by the Emperor Napoleon I, although it has never been alleged that he suffered from any form of dermatitis.

Principles of Protective Treatment

In my opinion too much emphasis cannot be laid upon the importance of using those substances which are most inert chemically for application to inflamed surfaces. I know that from time to time various ointments containing more active metals have had a reputation for the treatment of dermatitis. At one period there used to be a fashion for an ointment called unguentum metallorum. This contained (in addition to zinc) mercury and lead, and it is true that cases of dermatitis do get well although these more active applications are employed. I think that any virtue they may have is due to the fatty base with which they are made up, and that there is a struggle between the fatty base and the active metals like the struggle between good and evil. Fortunately for the patient and for the reputation of the physician, in most cases the patient has an inherent tendency towards recovery, which, although the best use may not have been made of it by the attending physician, wins in the end.

The theory of the protective treatment of dermatitis may be developed still further. Occlusive dressings are often of great service for inflamed areas on the limbs. Inclusion in bandages impregnated with zinc and gelatin paste such as were first introduced by the late Professor Unna of Hamburg is frequently of the greatest service. Most commonly used in cases affecting only the legs below the knee, they can be employed with advantage on the arms also. Nor is it necessary in all cases to use Unna's paste in the form of a bandage. It can also be used for patches of dermatitis on the trunk by incor-

porating it with successive very thin layers of cotton-wool so that it forms a sort of protecting mat over the area treated, and any stickiness of the mat's surface can be obviated by dusting it over with a simple powder.

Another useful method of protection is the employment of a substance called pellanthum. This is a sort of liquid ointment incorporating a good deal of zinc, which can be squeezed out of a tube, and dries on the surface to form a protective coating. It is non-greasy, and it is consequently often popular with patients, but it does not suit everybody, as it contains a certain amount of water.

Stimulating Treatment

Up to the present I have considered protective measures alone in the treatment of dermatitis or eczema, but I regret to confess that there are many cases which will not respond to these measures alone. There is an old dermatological adage that in acute cases soothing is required but in chronic cases stimulation is necessary. This is true to a certain extent, but the stimulation must be practised with great caution, for stimulation is closely akin to irritation, and we must always beware of causing irritation. Nevertheless, here I want to point out certain indications for the use of additional substances which may from time to time be incorporated with advantage in the simple protective preparations to which, up to the present, I have limited myself.

The first of these conditions is the formation of crusts and scales. These consist of imperfectly formed horny cells, which are thrown off before their time from inflamed surfaces. Their removal is greatly facilitated by the presence of salicylic acid in the ointment applied ; 10 grains to the ounce is sufficient. Sometimes, in the case of old patches where the oedema of the skin is not marked, showing that the inflammation is not very intense, improvement can be achieved by the incorporation of 1 or 2 per cent. of liquor picis carbonis in the ointment, or occasionally by painting the surface three or four times a week with liquor picis carbonis pure. This measure often also dries up groups of discrete eczematous papules which are threatening to coalesce to form a patch. Crude coal tar may also be incorporated (to the extent of 1 to 2 per cent.) in the simple protective ointment ; this appears to be most useful in infantile eczema. Occasionally, too, painting with a solution of silver nitrate of 1 to 3 per cent. strength will cure troublesome fissures and cracks. Another solution that may also be used with advantage is Bonney's paint, which consists of 1/2 per cent. solution of brilliant green and crystal violet in a 10 per cent. solution of spirit, but it is hardly ever possible to prophesy in any particular case which of these solutions is most likely to be of benefit. It is still a question of trial and error.

X Rays in Treatment of Dermatitis

I cannot conclude my remarks on the subject of the treatment of dermatitis without a brief reference to the virtues of *x* rays in this branch of therapeutics. Personally I do not know how I could get on without them. There is no other single therapeutic agent which is of equal value in the treatment of chronic skin disease, especially, perhaps, of chronic dermatitis. Used with skill and caution they frequently produce the most miraculous effects, and clear up cases which have previously resisted all the wiles of the apostles of protection and stimulation. The opportunity possessed by the specialist of employing *x* rays is the sole advantage he has over the ordinary practitioner in the treatment of chronic dermatitis. I do not here propose to go into the details of the technique of their administration, but will only say that given in doses not exceeding half a Sabouraud pastille at fortnightly intervals with a maximum of three doses in succession, and then at least a month's interval before they are used again the results are very gratifying. What is more, given in this way I have never seen the least harm result, although I am well aware of the terrible effects that have been caused by *x* rays injudiciously administered.

(I have said nothing of the internal treatment of dermatitis—that is another and less satisfactory story.)

THE STREPTOCOCCAL DERMATOSES

WITH SPECIAL REFERENCE TO THOSE OTHER THAN IMPETIGO

BY

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It is to the work of Sabouraud that we owe most of our knowledge of the streptococcal diseases of the skin, but though he has for more than thirty years expressed his emphatic views on the subject both in teaching and in writing, and though his doctrines are largely accepted in France at least, they are only slowly percolating into dermatological teaching in this country, and time and again one comes across, in published papers and in textbooks, a remarkable ignorance of his work. Speaking of chronic streptococcal infection of the scalp he states[1] : "It was and is still confused among the impetiginous eczemas (?) or has even, by a flagrant impropriety of terminology, been called seborrhoeic eczema." Such confusion is extremely common in this country, and as I have for the past six years endeavoured to study my cases of streptococcal infection from Sabouraud's point of view, and am convinced of the correctness of his teaching, I have thought it worth while to review my records of these cases in some detail.

Briefly, Sabouraud considers as streptococcal in origin the following diseases: *impetigo* ; certain forms of *intertrigo*, especially of the fold behind the ear ; a more or less extensive form of *dermatitis* seen typically on the scalp but with possible extension more or less all over the body with a predilection for the folds ; and *pityriasis alba*, "dartre volante" of the French. His bacteriological research has not taken him beyond the recognition of the presence of streptococci in cultures from these lesions, and when I[2] endeavoured to proceed further in the identification of the streptococci responsible for these diseases it became evident that, while a haemolytic streptococcus—a streptococcus as great in haemolytic power as that responsible for surgical affections—was recoverable from the acute streptococcal infection of the skin we know as impetigo, from the other conditions—intertrigo, dermatitis, and pityriasis—an entirely different type was isolated—namely, an anhaemolytic streptococcus. It is noteworthy that these conditions, though they may be acute in onset, tend to run a chronic course, and may persist for years. I do not intend to say much about impetigo, as I have little new to offer. That it is a streptococcal disease is now generally recognized, and with appropriate treatment it ought to be cured in ten days or so.

Streptococcal Dermatitis: Symptomatology

The typical lesion in the other type of infection is that of the fold behind the ear—an intertrigo. In mild cases it may not be noticed till the ear is pulled forward, when a red weeping surface is disclosed. The lesion is greatest

at the bottom of the fold, and here can be seen a very common feature: as the ear is pulled further forward a fissure suddenly appears along the line of the fold exuding a few drops of blood. The margins of the affected area are more or less scaly and crusted, depending on the stage of the disease. When established there is a copious discharge of serum from all over the affected area; there is no scaling, but crusting may be marked. Later, as the secretion lessens, scaling becomes more and more evident, crusting becomes less, and the condition disappears by becoming a more or less completely dry pityriasis. The redness fades, and the scaling gradually diminishes.

Out of 176 cases of streptococcal dermatitis (in which term I included intertrigo and pityriasis, as well as dermatitis *per se*) infection of the post-auricular fold was absent in only 15. On the other hand, I am convinced that every case of retro-auricular intertrigo can be regarded as streptococcal in origin. An anhaemolytic streptococcus can be isolated from every case, and the writer was struck by the remarkable purity of the culture which could frequently be obtained from this situation. This is not the case—and one cannot be surprised at the fact—with a streptococcal dermatitis, say, of the scalp. As will be seen later, streptococcal dermatitis may complicate other diseases, but even in a case of frank seborrhoea of the scalp, where the post-auricular fold is affected in this manner, we may be sure that, in this site at least, we are dealing with a streptococcal infection.

Though the infection may be confined for a long period, even for years, to the retro-auricular fold, extension is very apt to occur to the scalp, and the typical streptococcal dermatitis results—a condition easily recognizable clinically, and possessing the definite characteristics. The same features as are found in intertrigo are seen, modified by the locality.

The whole area presents a red glazed appearance, and there is abundant exudation of serum from its entire surface. The appearance differs entirely from that of eczema. There is no vesiculation, there are no "pits" from which the serum appears; it comes uniformly from the inflamed skin, the "exoserosis" of Sabouraud. If the serum is allowed to dry it forms crusts which mat the hair, but there is a distinct difference from impetigo in the continuity of the lesion—streptococcal dermatitis spreads by contiguity, impetigo by fusion of separate lesions, and in the latter disease one never sees such universal involvement of a large area of the skin; there are areas of more or less sound skin between the impetiginous lesions. As will be mentioned later, a combination of the two diseases often occurs.

If crusts are removed little depressions can be seen scattered over the scalp, but a close examination will show these to be the mouths of the hair follicles, which gape to some extent. The whole scalp looks tight and rigid over the cranium, and after a few weeks there usually occurs a more or less general defluvium of hair on the affected area, sometimes leaving it entirely bald. This is no disadvantage, as it is a great aid to treatment and is invariably temporary. As regression sets in the same features are observed as in the intertrigo: the serous discharge becomes less, scaling gradually takes the place of crusting, the redness fades, and a dry pityriasis is left.

Other folds besides those of the ears are frequently involved. The conjunctival fold may be affected, giving rise to a conjunctivitis, and, especially in infants, the creases of the neck can be the seat of this disease. The axillae, groins, and umbilicus may be involved, and also the folds under pendulous breasts in women. From any of these sites the disease may spread to the neighbouring skin, and the whole surface of the body may become affected. To diagnose the condition one must pay attention to the clinical appearance of the disease, remembering that the folds are the regions most seriously involved, and look behind the ears. The presence of intertrigo in this situation often gives the clue to the cause of a generalized dermatitis, perhaps so attenuated that the clinical picture is doubtful.

Though retro-auricular intertrigo is perhaps the commonest origin of a streptococcal dermatitis, it may commence on the scalp, as is so often the case with impetigo, secondarily to a pediculous infection, but the ears soon become involved, and the appearance of the disease when fully established is the same.

Duration of Infection, Incidence, and Complications

The persistence of infection in the superficial layers of the skin is one of the most surprising facts in dermatology. It is not at all uncommon. Ringworm of the scalp, tinea versicolor, and pityriasis simplex (dandruff) may all persist for years, yet in none of them does the parasite penetrate below the horny layer. Sycosis, the chronic staphylococcal infection, has a similar indefinite duration, and we find the same in streptococcal dermatitis. Untreated or incorrectly treated, the disease may last for years, sometimes appearing to regress and again spreading more or less rapidly to its former extent or even further. Early in my investigation this persistence of the infection was brought home to me. One of the first cases I examined bacteriologically was that of a child of 2, who had been under antiseptic treatment in my ward for three months, yet the *Streptococcus anhaemolyticus* was easily isolated from the lesions. Even with appropriate treatment one cannot expect cure of an extensive case in less than about three months, and too often a child almost cured ceases to attend, with the result that he reappears in a week or two as bad as ever.

The records of the skin out-patient department of the Dundee Royal Infirmary show 141 cases of streptococcal dermatitis out of 4,146 patients—an incidence of 3.4 per cent., which corresponds very closely with Haxthausen's[3] incidence of 3.2 per cent. in 4,700 patients attending the Polyclinic of the State Hospital in Copenhagen. The latter, however, included patients suffering from venereal diseases, which my own do not. Out of my cases 42 per cent. were males and 58 per cent. females. J. Goodwin Tomkinson[4] gives corresponding figures for impetigo as 47 per cent. males and 53 per cent. females in 1,107 cases. The similarity of the age-incidence curves of streptococcal dermatitis and impetigo is shown in the two charts (page 293). These two diseases are caused by similar micro-organisms: no "seborrhoeic" disease could possibly give this form of graph. Though streptococcal dermatitis is certainly more common in the hospital class of patient, dirt and neglect being responsible for the extension and continuance of the disease, mild cases, especially slight retro-auricular intertrigo, can be found not infrequently in patients from any walk of life.

Streptococcal dermatitis may be found in conjunction with other infections of the scalp, especially impetigo and follicular staphylococcal infection. Clinically they can be readily recognized, and with regard to the former disease I have been able to isolate the two types of streptococci where impetigo and streptococcal dermatitis were both present. A staphylococcal infection can be differentiated by the presence of definite pustules round the hair follicles, a condition never present in uncomplicated streptococcal infection. With regard to seborrhoea, Chart I shows a slight increase in incidence between 20 and 30, and this is detectable slightly later in Chart II. In my opinion the seborrhoeic skin is more prone to both forms of streptococcal infection than the normal, but not to any marked degree.

Treatment

One of the strongest proofs that streptococcal dermatitis is not an eczema is afforded by its response to treatment. Treatment suitable for eczema is of no value in this disease; the prolonged use of a suitable antiseptic is required. I tried the local application of a vaccine made from *S. anhaemolyticus* grown from several cases, but the results were disappointing.

Attention to detail is always necessary in medicine, and never more than when dealing with streptococcal dermatitis. Treatment should not be left in the parents' hands; it is somewhat, but not unduly, painful, and the pain is over as soon as the treatment is completed. Parents cannot be expected to adopt the required impersonal attitude. They are usually over-cautious and liable to under-treat; or, much more rarely, are unsympathetic, rough, and liable to over-treat. The first requirement, then, is the daily attention of a qualified nurse who thoroughly understands what is expected of her. In large towns this can be arranged for in hospital or other clinic, and in the country the district nurse

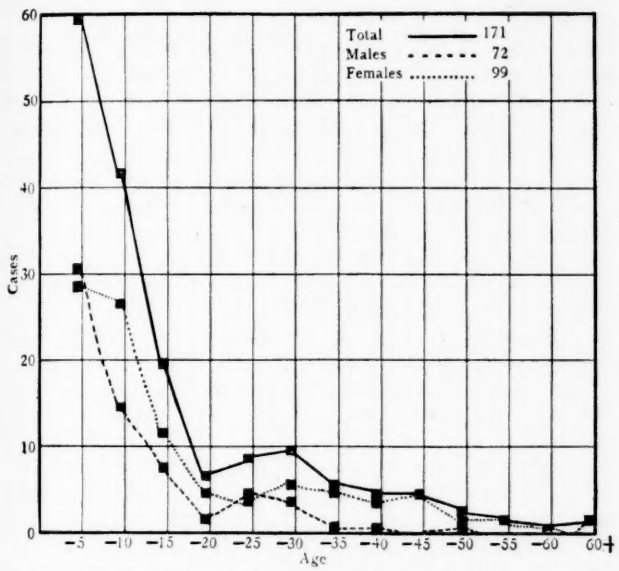

CHART I.—Incidence of streptococcal dermatitis in five-yearly periods.

is a valuable asset. In-patient treatment is not an advantage, unless for the reason that adequate treatment cannot be obtained outside (usually due to home neglect) or in the most extensive cases, which should be discharged as soon as possible. As normal a life as possible, with fresh air (not direct sunlight) and moderate exercise, helps the cure, prolonged hospitalization being of no advantage, and merely a waste of money.

Pastes and ointments of all descriptions have proved very disappointing in my hands, as they appear to encourage the growth of the streptococcus. I prefer to use a liquid antiseptic, and, after experimenting with, among other things, various aniline dyes, eau d'Alibour (copper and zinc sulphate solution), silver nitrate solution, and iodine, I pin my faith to *iodine in 1 per cent. solution* (it should not be used stronger or it will irritate). This can be applied either in spirit or, as I prefer it, in carbon tetrachloride. The latter is slightly less painful, is a better solvent of grease, and is less staining than the spirituous solution.

TECHNIQUE

The following is thus the scheme of treatment:

1. The hair is cut short and kept short. This means about one-eighth of an inch long, and entails repeating the clipping once or twice a week. As early as 1928 I used epilation by thallium acetate (as advised by O'Donovan), but gave it up, not because epilation was unsatisfactory or dangerous, but because a three-weeks wait was required before it was complete and because the very rapid re-growth necessitated recourse to the clippers after all.

2. Crusts and scales are removed by boric-starch poultices. The parents are carefully instructed how to prepare and apply them (I have been able to improve upon the excellent and detailed instructions given by Sir Norman Walker[6]). This can be done at home, and is repeated as often as necessary. At first it will have to be done every day or every other day, but as the disease regresses the intervals can be increased.

3. The 1 per cent. solution of iodine is applied daily. The method of application is important. The first few applications should be made cautiously to establish confidence between nurse and patient and also because the smarting becomes less as the treatment goes on. The aim should be to rub the solution in as firmly as possible without causing the lesions to bleed. For the

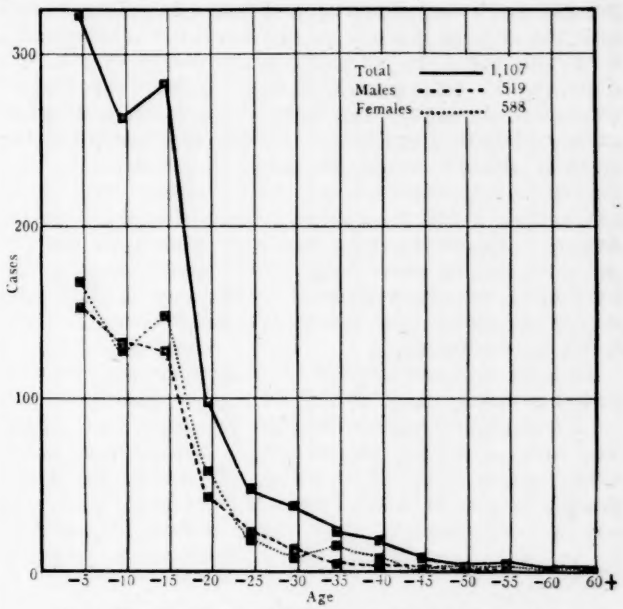

CHART II.—Incidence of impetigo in five-yearly periods. (Dr. J. Goodwin Tomkinson's figures.)

folds behind the ears a pledget of cotton is wrapped round a match-stick, dipped in the solution, and rubbed quite firmly into the fold; for the rest cotton-wool soaked in the solution is sufficient. For the eyes weak zinc sulphate-boric lotion is probably best.

4. As far as possible the lesions should be left exposed, but at night and where home conditions are dirty a light dry dressing may be necessary.

5. The co-operation of parents must be obtained; especially must they be warned to apply no treatment on their own. If they are not impressed with the necessity for avoiding greasy applications they are apt, on the mistaken idea that the scalp is being kept too dry, to apply olive oil, patent or other ointments of all kinds—usually only once, as the deterioration in the child's condition is then apparent even to them.

GENERAL HINTS

No change in the treatment is necessary till cure is complete, except that when the fine, dry, scaly stage on the scalp is reached—the face is usually clear by this time—the poulticing may be stopped and bi-weekly washing with soap spirit instituted, or the following shampoo instead.

Oil of cade	2	parts
Thymol	1	part
Green soap	33	parts
Methylated spirit ... ... to	100	,,

This should be well rubbed into the scalp, left for a few minutes, and then rinsed off with water. If there is any sign of increase in the irritation the shampooing should be stopped and the poultices resumed.

Where the body is extensively involved, and for the folds such as the axillae or groins, the application of a calamine cream, slightly carbolized, is often advantageous—for example:

Prepared calamine	9 parts
Zinc oxide	9 ,,
Glycerin of carbolic acid	2 ,,
Olive oil	40 ,,
Lime-water	40 ,,

It should be applied after the iodine has dried, and must be completely removed each day before re-dressing.

I have found that where a case of streptococcal dermatitis of the scalp is rebellious to treatment, elastoplast dressings may be used to advantage. They are applied in strips to cover the whole scalp and left on for a week. The hair must, of course, be as short as possible before application, and must be clipped each time the dressing is renewed. Removal is not too painful if care is taken to strip the scalp slowly and in the direction the hair grows. It takes courage at first to employ this method, and after the first week there is usually abundant pus below the dressing, but when the scalp is cleaned it will be found to be definitely less inflamed, and the dressing is reapplied with more confidence. I find that six of such weekly dressings are usually sufficient to bring the scalp almost to the dry pityriasis stage, where iodine completes the cure. No form of eczema has responded in this way to elastoplast in my experience; on the other hand, eczema is made worse by elastoplast.

It is of extreme importance that treatment be continued till every trace of the disease has gone, or it will surely return. Treatment should be stopped gradually. The daily application becomes thrice weekly, then twice, then once a week. Even when apparently cured the patient should be warned to report at once if there is any sign of recurrence, which can in the majority of cases be easily checked if the above treatment is promptly resumed.

Summary

I have endeavoured to describe briefly, and from my own observations, the manner in which streptococci may give rise to a dermatitis, and to show that, apart from impetigo, streptococci may cause an intertrigo, an exudative dermatitis, or a pityriasis. I believe that these conditions are not eczemas and that they have no connexion with seborrhoea. This entirely confirms the views of Sabouraud.

My experience also points to the fact that, while impetigo is caused by a haemolytic streptococcus, these other diseases are due to the action of an anhaemolytic streptococcus. This fact explains certain differences and certain similarities in the two groups.

The term "streptococcal dermatitis" is suggested as the most correct and convenient form of nomenclature for this latter group.

Suitable treatment is suggested.

I have to acknowledge with thanks Dr. Tomkinson's permission to use his figures for Chart II.

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THE DIAGNOSIS OF EARLY PULMONARY TUBERCULOSIS*

BY

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One cannot begin a discussion on the "early case of pulmonary tuberculosis" without first trying to answer the question, "What is the early case?"

A girl whose face recalls an Elizabethan love lyric and whose age is sweet and twenty complains of a cough that has lasted for two or three weeks, of blood-spitting, of lassitude. The physical signs in the chest are unhelpful, but we examine the sputum, and tubercle bacilli are scattered about like red Chinese characters on a blue scroll, and we take a skiagram and see a cavity the size of a shilling surrounded by a diffuse haze or set about with fluffy mottling. On close inspection we perhaps perceive a dense opacity the size of a millet seed near the periphery in the right lower lobe, representing a calcified tubercle, and the root glands on the same side are stippled with calcareous deposit. There has been a primary infection in childhood easily overcome by "natural resistance," and we are confronted by the evidence of reinfection. What happened in that latent period of ten or fifteen years? What determined the apparently sudden reactivation of hibernating bacilli in late adolescence? If the reinfection, which gives rise to phthisis, is of endogenous origin—and the weight of evidence favours this hypothesis as explaining the origin of most of the cases we meet—the disease with which we are confronted is itself a late phenomenon.

Our problem may become simpler when infection becomes less prevalent, and in particular when the exposure of childhood to infection is no longer allowed. When a first infection with Koch's bacillus is postponed till adolescence or early adult life the latent period, due apparently to a peculiar power of resistance in the years preceding puberty, is shortened. The processes of infection, the transient manifestations of haematogenous dissemination—for example, erythema nodosum, pleural effusion, or "acute benign tuberculosis"—and the development of the localized disease we recognize as phthisis may be studied seriatim. Pathological processes are speeded up and, as in a Canti cancer film, intervals in which nothing appears to happen are obliterated. The young probatitioner exposed for the first time to tuberculous infection in the closed space of a hospital ward is found after a few weeks to have developed the allergic state. The Mantoux test, previously "negative," becomes strongly "positive." We might here claim to have discovered the early case. And if the demonstration of "allergy" is soon followed, as it may be, by evidence of overt disease, our claim would appear to have been justified. But the majority of infections of this type, whether occurring in a hospital ward or the African gold mine, where young recruits from up-country first meet with tubercle bacilli, are not followed by tuberculosis, benign or malign. Some are taken and the others left, and the choice appears to be capricious.

At the present time all we can hope to do is to detect the disease at a stage when the lung tissues show the first signs of disintegration. Early disease of this order can be diagnosed, and can, in most instances, be arrested. But early disease must not be taken to imply limited disease,

* A paper read before the Mid-Essex Division of the British Medical Association on November 1st, 1934.

for—especially in early life—its spread is often rapid, and early disease may involve half a lung within a few weeks of its appearance. And we must learn not only to recognize early disease, but also the early recrudescence of disease which so often occurs. At this period of life every month during which the enemy can be staved off improves the prospects of a final victory.

The Two Types

It is customary nowadays to divide cases of pulmonary tuberculosis into two main groups: (1) the *proliferative* and (2) the *exudative*. These terms are cumbersome, and belong to the class stigmatized by Polonius as "vile phrases." But they are useful, and more precise words would perhaps fail to express as adequately as these do phenomena as yet imperfectly understood.

1. Proliferative disease is disease of chronic type. The exudation which marks its onset is rapidly followed by caseation and by fibrosis. The disease as we see it in the post-mortem room is of this type. The plates which illustrate the pathologist's textbook depict it—sometimes in glowing colours. Fibrous strands outline the bronchi, surround caseous areas, underline pulmonary fissures, and form the irregular, unyielding walls of cavities. In general, we may say that the phthisis of fully adult life and of middle age corresponds to this type, but examples are also seen in childhood, adolescence, and the early adult years.

2. For our scanty knowledge of the exudative types we have to rely chiefly on *x*-ray evidence. We have no opportunity of studying exudative disease in the post-mortem room. In this form, seen typically in the phthisis of adolescence, the most noteworthy feature is the tendency to parenchymatous exudation and the formation of soft-walled cavities. Such cavities are sometimes exactly circular, and, like the surrounding exudation, develop rapidly, and often disappear as rapidly as they have appeared, leaving only a faint linear scarring of the parenchyma. These cavities are so unlike the cavities seen after death that they were for long regarded not as true vomicae in the lung substance but as pleural rings. They are sometimes still incorrectly termed "annular shadows"—incorrectly, because they are not of ring form, but spherical, a fact easily demonstrated in lateral or oblique views or by stereoscopy. According to another ingenious theory they are not true cavities, but air bubbles. But they do not burst when pricked by the exploring needle, and that they communicate more or less adequately with bronchi is to be presumed from our constant observation that tubercle bacilli persist in the sputum so long as the soft cavity remains in the skiagram and disappear when the cavity is closed, whether by natural healing or by collapse therapy. Their behaviour when subjected to collapse therapy, under the influence of which they shrink concentrically unless held open by adhesions, supplies further proof that the soft cavity is indeed a gap in the lung substance. The terms "elastic" or "silent cavities" refer to their evanescent character, and to the fact that they cannot be demonstrated by physical signs, for physical signs do not depend upon the extent of disease, but upon its character.

Important Points in Diagnosis

From the diagnostic standpoint the important difference between the proliferative and exudative forms is that whereas pulmonary fibrosis is associated with more or less characteristic alteration in physical signs, pulmonary exudation of the kind occurring in early tuberculosis is not. Abnormal physical signs are often entirely lacking—neither palpation, percussion, nor auscultation will help you. I cannot understand the reluctance of writers of textbooks and the teachers of students to admit the demonstrable limitations of physical examination.

> "Through palpation one may feel deeply within the chest and outline and limit organs of different degrees of density, also detect different degrees of density caused by pulmonary infections and their complications. Infiltration, cavitation, chronic fibrosis . . . all give sensations to the palpating finger which depart from the normal as much as those conveyed by percussion, and which differ from each other to such a degree that the palpating sensation may suggest the diagnosis."

The above sentence occurs in a recently published American textbook on tuberculosis, and illustrations could be multiplied. Now even if the elaborations of physical examination to which so many chapters are devoted had any practical value—and most of them in my opinion have been proved to be useless—an *x*-ray examination occupying a tenth of a second provides far more accurate and helpful information than an hour spent on stroking the skin over muscles, percussing Krönig's bands, trying to detect deviation in the projected tongue, and so on. There is no sense in using a cephalotribe to extract a milk tooth!

In the days before radiology was available we were taught that physical examination only reveals 25 per cent. of the disease actually present. This wholesome teaching has been forgotten by those who still regard the skiagram as merely supplying corroboration of facts already ascertained by ears and fingers. The student should be taught that *pulmonary tuberculosis is a relatively silent disease*. It is this silence which differentiates it from most of the other chronic chest diseases. Bronchitis, bronchiectasis, malignant disease, pneumonoconiosis, the fibroid lung, all yield more or less characteristic signs. But when, as so often, a doctor writes: "I cannot find any physical signs in this patient's chest, *but* I suspect tuberculosis" he betrays the result of faulty teaching. "I cannot find signs, and *therefore* I suspect tuberculosis" should be the attitude.

You will say this is all very well, but if physical signs are unreliable what is the general practitioner to do? A surgery *x*-ray outfit is usually impracticable, and the interpretation of chest films demands an experience so highly specialized that even a radiologist may prove an untrustworthy guide unless he has received special training. But there is no need to submit every person suffering from a cough to an *x*-ray examination. The problem is indeed simpler than it appears.

Every student knows that there is one type of aortic aneurysm that is demonstrable by physical signs and another that reveals itself by symptoms. Now the fibrocaseous type of tuberculosis supplies more or less characteristic physical signs—upper lobe dullness, harsh breathing, fibrotic crepitations, and so on—but the type of tuberculosis that returns no answer when you knock usually betrays itself by symptoms. And both types shed tubercle bacilli, for both give rise to cavities, though an examination of the patient's saliva may supply a negative return from the laboratory. Two or three sputum tests may be necessary, though it is surprising how often the first examination will reveal bacilli, even in a very early case; and even the frightened patient who swallows her sputum may often be outwitted by an examination of the faeces. The sputum test is the simplest and, apart from *x*-ray examination, the most reliable test for tuberculosis, and yet it is frequently neglected, with disastrous results. A sputum outfit should be kept on every consulting room table as a reminder.

General Symptomatology

With regard to symptoms, of what does the consumptive complain when he comes to see you? I have looked through my notes of fifty young consumptives (age period

15 to 25 years) recently seen at Victoria Park, and nearly all supplied some hint, not of what physical signs, but of what sputum test or skiagram would reveal.

Rejecting six cases which were apparently of at least six months' duration when I first saw the patients, I note that thirty-seven out of the remaining forty-four had symptoms suggestive of tuberculosis. Thus fourteen of these young persons complained of cough with expectoration, while no fewer than twenty-three admitted to haemoptysis ranging from stained sputum to frank haemorrhage of the classical type. Approximately 50 per cent. of the total number gave a family history of tuberculosis or admitted close contact with infection. A closer questioning would doubtless have revealed an even higher figure. Physical examination yielded suggestive signs in only half of the forty-four cases, while in the remainder physical signs were absent or equivocal on what one might call a surgery examination.

I believe that the somewhat discredited old term "the tuberculous diathesis" conveyed a measure of truth. The patient who looks the part is more likely to be tuberculous than the patient who does not. And if attacked the former is more likely to succumb than the latter. As middle life approaches, and in the male sex, the patient's appearance is less distinctive.

The plaintive whine of the patient seeking sympathy is seldom—I had almost said never—heard from the tuberculous. The tendency to minimize symptoms, return evasive answers, or offer explanations for any symptoms reluctantly admitted is so typical of the consumptive that such a disposition should at once suggest the possibility of this disease. This is especially noteworthy when the question of blood-spitting is raised. If the tuberculous patient has had no haemoptysis he denies in the tone of one who has been insulted by an offensive suggestion. In haemoptysis from other causes the patient may treasure up his expectoration, proudly unroll his handkerchief for your inspection, or triumphantly extract a little bottle of blood-stained sputum from his trouser pocket. He does not explain that he knows it only came from the back of his throat. "I had my tell-tale handkerchief, and would not even look at it myself because I wanted to believe that I had coughed up nothing but a little discoloured phlegm." Those are not the words of a factory hand, but of a highly trained scientific observer when describing a haemoptysis which occurred on the old underground railway in the days of his youth. The same "ostrich complex" may be reflected in the manner and supporting remarks of a parent.

The patient's appearance is worth more than a passing glance. The bright eyes and delicate complexion of the consumptive girl are familiar to us all. The smooth skin of the tuberculous was noted by Hippocrates. Even in middle age the skin of the thorax is often curiously smooth and fine in texture. Sweating axillae are more significant than a history of night sweats. The latter is too often obtained from all classes of patients to have much diagnostic significance.

Assessment of Symptoms and Signs

With regard to the physical examination, inspection of the form and movements of the chest are of little help in the detection of incipient tuberculosis. The same may be said of percussion, unless pleurisy with effusion or bronchopneumonic consolidation complicates the picture. But auscultation may be of more value, for a weakening of the breath sounds may be obvious over an area of early infiltration. Fine, moist crepitations—heard best in the inspiratory phase following a short cough—audible over the apex or subapex of an upper or lower lobe are almost diagnostic. But we must not expect to hear them. They indicate very active disease and widespread involvement of the affected lobe. The apex of the lower lobe is favourably situated for auscultation. We are not likely to forget the "zone d'alarme" internal to the spine of the scapula when searching for crepitations, but we are apt to forget that a second "zone d'alarme" is situated internal to the angle of the same bone.

If the patient's symptoms, history, manner, appearance, if the physical signs or their significant absence, indicate the possibility of tuberculosis, the sputum test, repeated two or three times if necessary, will in the majority of cases prove the diagnosis. If the sputum test is negative, *x*-ray examination is essential before a final opinion can be given. And if this supplies evidence of tuberculosis *x*-ray control will thereafter be essential, for the progress of the case can only be adequately studied and its treatment properly conducted in the light of the information that only *x* rays provide.

Conclusion

Finally, I would stress the importance of radiological technique and interpretation. A poor skiagram is often worse than useless, and a good skiagram wrongly interpreted may lead to disastrous results. As an illustration of the difficulties that may attend the correct interpretation of a chest radiogram I might instance a case recently under my care. The patient had worked with silica for thirty years. The skiagram showed a small tuberculous cavity and a general miliary stippling of both lungs such as is commonly seen in pneumonoconiosis. I jumped to the conclusion that the case was one of silicosis, but the skiagram might have been interpreted as indicating miliary tuberculosis. A few weeks later necropsy revealed miliary carcinomatosis and a single insignificant tuberculous cavity.

THE SPRINGS OF NEUROSIS*

BY

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Those whom we loosely call "neurotic" live in a dismal twilight of ill-health, and drift from doctor to doctor or from cult to cult without receiving the study and understanding which we accord to other types of patients. Neurosis probably accounts for far more suffering and disability than tuberculosis, yet a comparison between the amount of study and research extended to each of these diseases reveals a serious deficiency in medical education. Asthmatics, diabetics, and dyspeptics receive careful handling, co-ordinated research, sympathetic reception, and rational treatment. Neurotics get short shrift. Indeed, it is not too much to say that the average doctor bristles with prejudice against those whom he calls neurotic, and against the word "neurosis" and everything about it. This prejudice is born of fear, which in turn is born of ignorance. For among the many anomalies of the existing system of medical education the absence of proper instruction in psychological medicine is perhaps the most glaring and chronic. Moreover, with one or two exceptions, the literature on psychological medicine is very dull and unhelpful. The psychologists were called "sad dogs" by Sir Clifford Allbutt when he discussed the confusing terminology of psychological medicine.

The object of this paper is to attempt to survey the whole range of those loosely termed "neurotic" in terms, not of formal psychology, but of practical clinical medicine.

I begin with a rough classification.

* A lecture given to the Darlington Division of the British Medical Association, November 22nd, 1934.

The Neurotic Hierarchy

A. THE FALSE NEUROTICS are those in whom organic disease is present, but is either
   Unrecognized (from not knowing), or
   Unperceived (from not looking).

B. THE ASTHENICS suffer from fatigue due to many causes, including:
   Chronic pain or discomfort.
   Chronic postural defect.
   Endocrine disorder.
   Toxaemia.

C. THE ODD AND ECCENTRIC.

D. THE NEURASTHENICS.
   Sexual.
   Environmental.
   Traumatic.

E. THE HYPOCHONDRIACS.
   Senile.
   Menopausal.
   Vicarious.

F. THE TRUE NEUROTICS, subdivided into several types, concerning:
   Flight, or the seeking of refuge.
   Aggression, or the seeking of power.
   Imitation, or submission to suggestion.
   Conflict between self and herd.
   Repression of degraded instincts.

G. THE HYSTERICS.

H. The PSYCHASTHENICS.
   Obsessional.
   Compulsive.

I. THE PSYCHOTICS, including:
   Manic-depressive types.
   Schizophrenic types.
   Paranoid types.

J. DEMENTS IN THE INAUGURAL STAGES.
   Late syphilis.
   Arteriosclerosis.

My plan is to consider each of these classes briefly in turn, with the exception of I and J. The members of these two latter classes frequently masquerade as neurotic in the early stages, but that is as far as they concern us here. I merely want to emphasize that many patients loosely labelled "neurasthenic" are in reality suffering from manic-depressive insanity.

A.—False Neurotics

The false neurotics are those in whom we fail to detect organic disease, and I think this failure more often occurs from not looking than from not knowing.

The commonest maladies which are prone to mimic neurosis are suppuration in the accessory sinuses, dry bronchiectasis, disseminated sclerosis, and nodular fibrositis. The latter is a really common disease, and is the source of much ill-health and suffering. It can, further, be the source of great credit to him who knows of it, recognizes it, and cures it.

In similar fashion I think there is no doubt that phthisis, cerebral tumour, post-encephalitic states, and epilepsy may all mimic neurosis, but there are two organic diseases which I particularly wish to stress as very real, very distinct, very disabling, and very chronic. Each has become a rather dilapidated diagnosis, but each mimics neurosis very closely and very frequently. I refer first to gastritis and secondly to anaemia, and I go so far as to assert that no person should be dubbed neurotic, no matter what the temptation, until the physician is confident that gastric secretion and mobility are normal and the haemoglobin content well up to the normal range.

B.—Asthenics

The asthenics form a bulky and unwieldy class, but individually each member is worthy of very close scrutiny. There are innumerable causes of moderate pain, perhaps nothing more than occasional discomfort, which nevertheless in time wears down a person's stamina and fortitude. Among these causes might be mentioned at random cholecystitis, spinal arthritis, salpingitis, and pyelitis.

I do not know exactly how the assumption of personal untidiness affects the temperament, but I do know empirically that the surest way for a man to induce in himself a dingy neurosis is for him to allow physical slackness in himself. One might indeed say "Untidy man—untidy mind."

Endocrine dysfunction is one of the commonest causes of vague invalidism likely to be deemed neurotic. The most important type is called "chronic benign hypothyroidism." This condition is far short of classical myxoedema, but can often be recognized in tired middle-aged men. The patient complains of fatigue, flabbiness, somatic pains, headache, and pessimism. It is one of the few maladies in which an educated man will actually use the word pessimism in describing his symptoms. There is probably no condition where accurate diagnosis and appropriate therapy is more satisfactory to all concerned.

Other types of endocrine disorder in which apparently nervous invalidism may ensue include hypofunction of the adrenal cortex and hypofunction of the anterior pituitary. Extreme degrees of these are known respectively as Addison's disease and Simmond's disease, but milder syndromes corresponding to chronic benign hypothyroidism undoubtedly exist. Clinical research is here very backward. In connexion with endocrine disorders I have not forgotten Graves's disease, in which the emotional element is always present and frequently predominant.

Toxaemic asthenia is again a very vague and unwieldy group. I will hurry over it by stressing merely the general constitutional depression which may arise from pyorrhoea, from post-influenzal states, from cholecystitis, and from excess of nicotine and caffeine.

C.—The Odd and Eccentric

A consideration of those who are odd and eccentric involves the term "conditioned reflex." A "conditioned reflex" may be defined roughly as a habit which has been instilled by experience. According to one school of psychology associated with the name of Watson all temperament and all behaviour is made up of conditioned reflexes. In other words, a man is no more and no less than what he has been taught to be. The advanced students of Watson's notions of behaviour believe that there is no essential difference between conscious and unconscious, no volition, no moral law, no free will, and no mutual tenderness. A grown man, in other words, is merely a parcel of reflexes. I am not, of course, going to press this view, but I mention behaviourism because of two important aspects.

1. First, an enormous amount of neurotic invalidism springs from faulty education in home, church, and school. Some children are literally taught the technique of irrational fear or coached in the pernicious habits of evasion and compromise. "Safety first" is a thoroughly bad psychological principle. And a great many notions are given in the name of theological instruction which may or may not be sound theologically but which are certainly psychologically calamitous.

2. The second point about conditioned reflexes is that their interruption or eradication may lead to perplexity, bewilderment, anxiety, and jarring. In clinical terms, the break-up of lifelong habits may bring about a condition of neurosis far more severe than is ordinarily expected. Happy, therefore, is the man who prepares for his own retirement not only financially but also intellectually. There is no neurotic like an elderly neurotic.

D.—Neurasthenia

Neurasthenia is a well-defined and sharply limited malady in which the central feature is fatigue. Along with fatigue go obviously irresolution, indecision, and irascibility.

Sexual neurasthenia may spring up in one of several ways. One of the commonest types of sexual neurasthenia is that which arises from faulty technique in birth control. In this the autonomic nervous system of one partner is subjected to regular and repeated jarring by means of stimulation without adequate gratification. Fear and repugnance ensue instead of repose. There is

probably more misery and ill-health from this than from any other single cause in the whole range of medicine. Another and milder type of sexual neurasthenia is seen in young people who inflict on each other a prolonged and stagnant engagement period. Yet other types of sexual neurasthenia spring from fears, taboos, and repressions which I think are self-explanatory. And, finally, a very large amount of sexual neurasthenia springs from faulty education and confusion between the poetical and the ridiculous.

Environmental neurasthenia is fatigue caused by occupation which is too monotonous to be interesting and not monotonous enough to be capable of automatic performance. Weavers, machine-tenders, packers, and mass-production factory hands engage in work which is so automatic that they can indulge in relief by gossip or day-dreaming. By such relief fatigue is avoided. On the other hand, work which is monotonous and yet sufficiently catchy and varied to demand ceaseless attention often causes fatigue and neurasthenia. Accordingly neurasthenia is exceedingly common among bus-drivers, telegraphists, schoolmistresses, and housewives.

Traumatic neurasthenia is a very vague section of medicine. There is no doubt that a bodily shaking, coupled with the springing up of ideas of grievance, may undermine the most stalwart temperament. Exactly how this happens is not at all clear. In some cases there is a physical basis in the form of an actual bruise of the brain. I have personally seen such a bruise twice in cases of atypical traumatic neurasthenics who happened to die from other causes. I think a brain bruise may be a common lesion. Patients with traumatic neurasthenia drift from door to door, but rarely come to post-mortem.

Of course, traumatic neurasthenia is nearly always worsened by brooding, physical deterioration, misconceptions, and cupidity. The injured workman with an unsettled claim for compensation, who engages in endless pilgrimages to doctors' consulting rooms and solicitors' offices, and labours under the diagnosis of traumatic neurasthenia is a standing reproach and slur upon the professions of both law and medicine.

E.—Hypochondriasis

With the hypochondriacs or valetudinarians we enter the group of true neurotics. A true neurotic is one whose actions and temperament are coloured and flavoured by distorted instincts and emotions.

The hypochondriacs suffer from distortion of the instinct of self-preservation and the instinct of collecting and accumulating things. They are, as Hutchison has described, unreasonably and rather foolishly anxious about their personal health. They collect symptoms and doctors just like other people collect pictures, china, furniture, or coin of the realm. Fortunately most of a hypochondriac's collection consists of fakes and spurious symptoms, but inevitably he turns up sooner or later with a genuine article. No hypochondriac has a collection of symptoms that is wholly and permanently spurious.

Clinically hypochondriasis is very common indeed, and extreme degrees are frequently encountered. The late Sir Clifford Allbutt used to tell the story of an elderly hypochondriac whose study was decorated with numerous framed originals of specialists' reports, and Sir William Hale-White recently reported in the *Lancet* the case of the hypochondriac whose consumption of drugs was so great that the chemist called each day for orders.

Before leaving the hypochondriacs I should like to recall Hutchison's further observation—that hypochondriasis may be vicarious. In other words, a son or daughter may exhibit pathological solicitude about an elderly parent.

F.—True Neurotics

The true neurotics exhibit vague invalidism, intractable symptoms, and irresolute temperament because they suffer from distortion of primary instincts and emotions. It is alarming to discover how little one knows of the mechanism of this distortion when one comes to reflect seriously upon it. Factors of heredity, environment, and education all play a part, but there must be many other factors which are not properly charted.

The instincts which on distortion are most likely to be springs of neurosis are the instincts of self-preservation, the herd instinct, the love of power, the love of soft and warm security, and the instincts centred round sex. These cannot be considered separately because they act reciprocally and in highly complex fashion. Instead I suggest a consideration in terms of practical clinical medicine somewhat as follows.

1. Neurotic invalidism, especially of the submissive, resigned, placid type, may be the result of subconscious mechanism in a person who finds the world too hard a place and who desires security, refuge, and irresponsibility without loss of self-respect and without the stigma of incompetence or cowardice. A great deal of gastric, cardiac, and colonic illness springs from this source. Cardiac and gastric neurotics often enjoy quiet, comfortable, and respectable invalidism, which absolves them from personal responsibility and strife with the world.

2. Neurotic invalidism, especially of the flamboyant or ostentatious type may be the result of subconscious mechanism in a person who ardently desires power and priority. This phenomenon is frequently seen in children. Illness is a quick and certain means to tyranny and precedence in many a household. In certain types of persons the subconscious mind readily provides such means. Pseudo-angina, mucous colitis, and pyloric spasm are the best examples of this kind of flamboyant invalidism. There is a character in one of Shaw's plays who illustrates this type of invalidism. He was a repressed dissenting clergyman, who always referred to the Church of England as the "Scarlet Woman." He sought, and easily secured, immense power and prestige in his household and district by neurotic cardiac invalidism. For years he was a domestic tyrant of the worst type. By a grim irony he died of scarlet fever, and at the post-mortem the heart was found to be perfectly normal.

3. Neurotic invalidism, especially of the placid and peaceful types, may be nothing more than distortion of the instinct of submission, so that crude imitation takes place. A potentially neurotic person may copy the symptoms of one who is loved or feared. Aerophagy, habit-spasm, constipation, and sundry types of dyspepsia often arise in this way. The same subconscious mechanism operates by way of suggestion. A good deal of neurotic invalidism is inculcated in the timid, ill-informed, and debilitated by querulous relatives, newspaper advertisements, and injudicious "health" articles in weekly journals. Occasionally the same happens in our own consulting rooms, by what may be our most trivial and innocent remarks or our most natural diffidence.

4. Neurotic invalidism may also arise from conflict, which is the technical term roughly describable as subconscious perplexity. Such perplexity occurs when instincts of self-preservation clash with instincts concerned in the promotion of the welfare of the herd. A solution of the difficulty is furnished by subconscious mechanism in the form of safe, comfortable, and respectable illness, with preservation of self and escape from the sacrifices required in herd welfare or social service. Another form of conflict or subconscious perplexity arises when sexual instincts undergo regression or degradation. In such cases there is a serious clash between social and moral forces outside the individual and erupting forces within himself. Such a conflict is highly provocative of nervous restlessness, alternating depression and elation, superstition, selfishness, vanity, and all the hall-marks of neurotic invalidism.

G.—Hysteria

The hysterics are refugees from reality. Contrary to popular impression, the word hysteria does not imply turbulence, talk, and tantrums, but rather a kind of peaceful, pleasant pessimism.

The hysteric is one who, by subconscious mechanism, converts his emotional difficulties into visible outward physical expression. The hysteric's difficulties may spring from his own ideas of inferiority or superfluity, from a knowledge of incompetence or insufficiency, or from intolerable environmental difficulties. The commonest hysterical manifestations to-day are aphonia, sundry tics, tremors, spasms, epileptiform convulsions, and sundry

forms of muscular weakness. Each illness provides a solution of intolerable difficulty or a refuge from intolerable hardship. Unluckily for the hysteric, the subconscious solution or refuge is often highly troublesome and inconvenient. Hence the description of hysteria which I have just given—namely, pleasantly peaceful pessimism.

H.—Compulsive and Obsessional Neuroses

These are particularly severe and painful illnesses in which the patient labours under an imperious and overriding requirement to perform unnecessary and irrational acts, or to perform needless ritual or to think along ceaselessly recurring lines of thought. One of the worst forms of compulsion neurosis is that in which the patient finds herself ceaselessly washing her hands. Milder forms of obsessional neurosis include sundry forms of explosive utterance or coprolalia, sundry odd habits, and mild forms of kleptomania. These forms of neurosis spring from hidden fears. The hand-washing neurosis, for instance, may spring from fear of contamination, real or metaphorical. Most of the fears concerned can be traced to fears about personal integrity.

The remaining classes (I and J) in the table are not strictly within the scope of this review. But members of these classes form a very large number of those commonly called neurotic or neurasthenic.

PULMONECTOMY

A PRELIMINARY REPORT ON TWO CASES IN WHICH AN ENTIRE LUNG HAS BEEN SUCCESSFULLY REMOVED

BY

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Total pulmonectomy, although occasionally attempted, was in no instance successful until 1931, when Nissen, working in Sauerbruch's clinic in Berlin, resected the entire left lung of a girl aged 12 years who was suffering from bronchiectasis secondary to a traumatic rupture of the left main bronchus.[1] In the following year Haight, working in Alexander's clinic in Michigan, repeated this success when he removed the entire left lung of a girl aged 13 years, in whom bronchiectasis had followed delayed removal of an aspirated foreign body.[2] The operation is probably more hazardous in cases of bronchiectasis than in neoplastic disease owing to the greater risk of sepsis; and although a few additional successful cases have been reported during the last two years in America—notably by Evarts Graham[3] and Reinhoff[4]—these have been mostly for growths.

This is a brief preliminary report of two cases of unilateral bronchiectasis—one a girl and the other a boy—which have recovered after removal of an entire lung, the left and the right respectively. There was no degree of stenosis of the stem bronchus in either case, such as was present in those operated upon by Nissen and Haight. Mass ligatures were applied to the lung root in each case to promote gangrene in the lung prior to its removal. This was the method employed by both Nissen and Haight, and appears to be the only one by which a bronchiectatic lung has been successfully removed.

First Case

N. W., a girl aged 13 years, was referred by Dr. Horsley Drummond. Since the age of 5 she had suffered from recurrent attacks of "pneumonia," each of which had been followed by profuse expectoration of foul sputum. In 1931, following such an attack, an empyema in connexion with the base of the left lung had been drained at another hospital. She was admitted to the Royal Victoria Infirmary, Newcastle-upon-Tyne, at Easter, 1934, suffering from a pneumonic attack. Subsequent lipiodol examination demonstrated bronchiectasis of the entire left lung. The sputum diminished and almost completely disappeared with general treatment, but marked pallor and clubbing of the fingers persisted. The chest wall was retracted on the left side and the sternum unduly prominent.

Operation: May 4th, 1934.—Anaesthesia was administered by Dr. W. J. Phillips. Preliminary basal narcosis with avertin (80 per cent. of the charted "Bayer" dose) was given, intratracheal insufflation of oxygen, warmed ether vapour, and a small quantity of nitrous oxide. A second intratracheal tube was also introduced to facilitate evacuation of pulmonary secretion. The patient was placed on her right side with a sandbag under the chest. A long incision was employed, extending from the spine behind to the sternum in front, and crossing the scapula about 3 cm. above its angle. The latissimus dorsi, etc., were divided in the line of the incision and the scapula retracted forwards and upwards. The fifth and sixth ribs were divided close to the spine, and their intercostal muscles divided throughout the length of the incision. These ribs were then widely separated with the help of a de Quervain retractor. The lung was completely adherent, but the two lobes were freed and mobilized with comparative ease. Two stout braided-silk ligatures

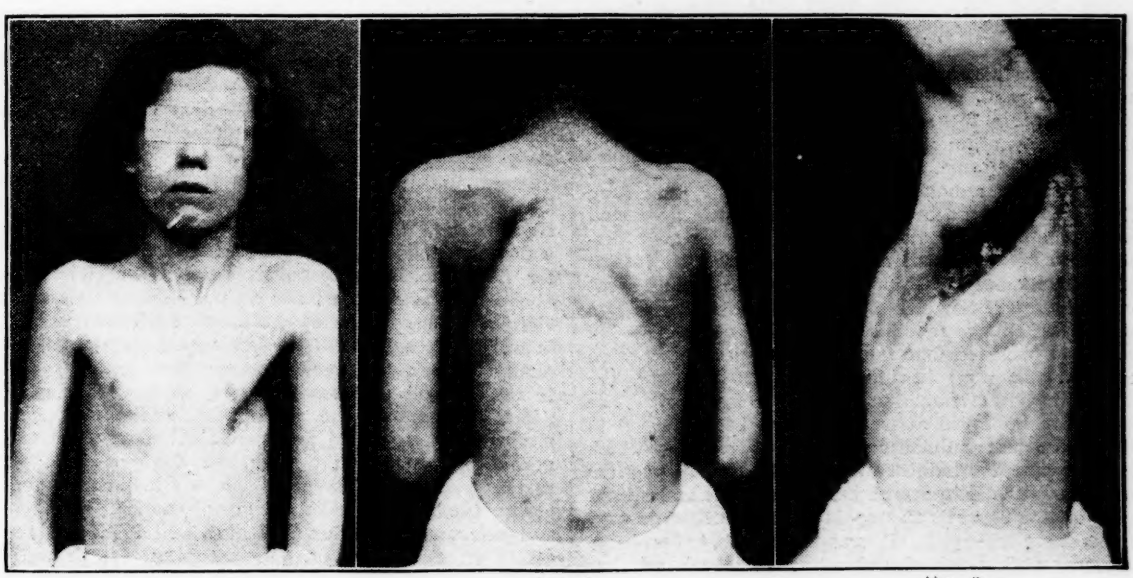

FIG. 1. FIG. 2. FIG. 3.

(Pearsall No. 22) were tightly applied to the pedicle of each lobe, and the phrenic nerve was divided above the root of the lung to facilitate subsequent obliteration of the cavity.

During manipulation of the hilus, and whilst the ligatures were being tightened, curious bodily jerks, apparently violent respiratory movements, occurred; in addition and simultaneously, the auricles were seen to distend the pericardium, whilst the aorta apparently ceased beating. These phenomena recurred at least fifteen or twenty times. Gauze tampons were wrapped round the lobes to prevent re-adhesion, and the wound was almost completely closed, except posteriorly for the tampons. Flavine was instilled daily.

The wound was reopened on the sixth day and the tampons changed. This was repeated on the eleventh day, but on this occasion the lobes were ablated with the help of a thermocautery and the wound left widely open throughout its entire length. Two or three days later the small remaining fragments of the pedicles in the ligatures sloughed off, and the cavity immediately began to diminish in size. There was slight pyrexia, and the pulse ran in the vicinity of 120 per minute for almost a fortnight after the sloughing lung was removed from the chest; but the thoracic cavity appeared clean and the general condition steadily improving. For two or three days after the operation there was some degree of oedema of the opposite lung, but this was easily controlled by atropine.

Progress.—Massage and appropriate exercises were carried out from an early stage in order to prevent the development of scoliosis. Having gained over a stone in weight, and with the general health greatly improved, the patient was allowed to return home on September 30th. She has attended as an out-patient at frequent intervals since then. She is now free from cough and expectoration. The cavity has been largely obliterated by flattening of the chest wall and elevation of the paralysed diaphragm. It is now only the size of a walnut, and is epithelialized; on its floor are two bronchial fistulae, which are becoming very slowly but progressively smaller, and hence are unlikely to require any further plastic procedure (Figs. 1, 2, and 3).

Second Case

J. W., a youth aged 18 years, was referred by Professor W. E. Hume. When 5 years old a small stone became impacted in the right bronchus and was not coughed up until two years later. Since then there has been a constant and copious expectoration of foul sputum. The patient had been in a sanatorium at one period, but tubercle bacilli were never detected in his sputum. Recently, marked signs of toxic absorption became evident—clubbing of the fingers, night sweats, and loss of weight. Eight or ten ounces of foul sputum were being coughed up daily after admission to the Royal Victoria Infirmary, Newcastle-upon-Tyne. A lipiodol examination revealed the presence of such a gross degree of bronchiectasis that only scattered pools of lipiodol were seen in the right lung. The heart and trachea were much displaced to the right side. The right phrenic nerve was evulsed in September, 1934, as a preliminary to pulmonectomy. The sputum subsequently diminished in amount to two ounces per day.

Operation: October 18th, 1934.—Anaesthesia similar to that in the first case was again given by Dr. W. J. Phillips. The incision was also the same. The right side of the chest was opened. Despite the radiological appearances the right lung was not adherent, except by a few bands at the apex and by a dense symphysis to the paralysed and elevated diaphragm. The lung was small and shrunken, and as it was difficult to demonstrate the interlobar fissure, only one stout braided-silk ligature (Pearsall No. 22) was tightly applied to the whole hilus after mobilization. No obvious reflex phenomena were observed, but the blood pressure (as recorded in the arm) at this stage having fallen to 30 mm. Hg, the operation was rapidly terminated, as in the first case. The condition rapidly improved after the patient had returned to bed, but a persistent pulmonary oedema developed, which required the repeated administration of atropine during the subsequent fortnight. The wound being reopened, under light anaesthesia, on the seventh and again on the thirteenth day, the tampons were changed. It was hoped that the lung, which was now very much shrunken, would slough off, but as it failed to do so, it was removed with the galvanocautery thirty days after the operation.

Progress.—The wound and the cavity have diminished in size with amazing rapidity, the diaphragm having risen steadily, and the mediastinum having moved across in a striking manner. The cavity itself is now—three months after the operation—only about one-fifth or one-sixth of its original size, and, although it is not impossible, it appears highly improbable that a thoracoplasty will be required to obliterate it completely. There are at present three small bronchial fistulae, through which a certain amount of flavine-stained discharge is aspirated from the cavity and expectorated, but this only amounts to approximately half an ounce per day. The general condition is steadily improving, the boy having a good appetite and sleeping well. It is hoped, with confidence, that he will soon be able to go to a convalescent home.

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[3] Graham, E. A., and Singer, J. J.: *Journ. Amer. Med. Assoc.*, 1933, ci, 1371.
[4] Reinhoff, W. F.: *Bull. Johns Hopkins Hosp.*, 1933, liii, 390.

Clinical Memoranda

Recurrence of Large Fibroid from Cervical Stump after Supravaginal Hysterectomy

Any recurrence of a fibroid growth from a seedling in the cervical stump after supravaginal hysterectomy must be a rarity; still more so one so enormous as almost to fill the abdominal cavity.

On March 13th, 1926, I removed a large multinodular fibroid and a left-sided cystic ovary from a woman aged 35, leaving the right ovary and tube and the usual cervical stump. Eight years later, on April 12th, 1934, I was asked by Dr. Ryan of Worthing to see the patient again. She had complained of "hardness of the stomach" for three years, frequency of micturition for two years, and an increasing abdominal tumour for about a year. The bowels were constipated. There had been complete amenorrhoea and no vaginal discharge since her operation. She had lost 2 stone in weight within twelve months; she looked ill, and was feeling tired and unable to carry on her duties.

On examination there was an enormous tumour reaching from the symphysis to the ribs, giving the impression of being cystic in parts and firm and solid in others. It was dull all over to percussion, and the dullness extended into the left flank, while the right flank gave a tympanitic note. The dullness and tympanitis did not shift with a change of position. Per rectum the pelvis was filled with a smooth swelling, apparently continuous with that above, and not giving the impression of being fixed.

I thought, in view of the marked loss of weight, that the growth was probably an adenocarcinoma arising from the remaining right ovary, and although the outlook seemed poor I advised an exploratory operation. This was carried out on April 19th. An incision from the symphysis to the xiphisternum was necessary to deliver the tumour, which proved to be a fibroid with an extension downwards that filled and was moulded to the cavity of the pelvis. The sigmoid and pelvic colon were tightly stretched across the left lateral and posterior walls of the tumour below for about eight inches, like tiny, thin, flattened ribbons, half an inch wide only, and so attenuated that it seemed almost impossible for faeces to have passed through them. The peritoneum above them was incised and stripped downwards and inwards along with the ribbon of the bowel, adhesions to the bladder in front were separated, the pelvic portion was delivered, and finally the whole tumour was divided from its attachment to the left side of a small cervical stump. The right ovary, which was cystic, the right tube, and the appendix were removed; the sigmoid and pelvic colon were sutured to the peritoneum on the left side, and a glove drain put down to the space behind them, which was inclined to ooze.

The tumour, immediately after removal, weighed 12½ lb., and measured 13 inches in length and 9 inches transversely at its greatest diameter. Microscopically it proved to be a simple fibroid. The patient made a good recovery.

Hove. H. N. FLETCHER.

Repeated Footling Presentation in a Native Woman

The following report of a case may be of interest, and may perhaps evoke comment from readers who might have seen or know of similar cases.

CASE RECORD

The patient was an African woman (Jaluo tribe) about 34 years of age. She was a 9-gravida. Menstruation was normally 3–4/28–30 days.

History.—The account of her former pregnancies was as follows. After a normal labour she gave birth (? in 1918) to a female child, which died at the age of 3 months. A second child was born (? in 1920) after a normal labour, but died at the age of 1 year. In 1922 she aborted at three months. In 1923 she had a difficult labour with a normal presentation, and gave birth to a male child, which lived for a year, dying of bronchopneumonia. A female child was born (? in 1925). It was apparently a transverse lie, as the arm appeared out of the vulva first, after which this was retracted, and the child was born via a footling presentation. The child lived. The birth of a male child, by means of a footling presentation, occurred (? in 1927). The child died at 4 months. A female child was born after a difficult labour (? in 1930), the presentation being a vertex. The child lived. The next child, a footling presentation, with a difficult labour, was born (? in 1932), and lived for ten minutes. She had no history of syphilis or yaws, and her Kahn reaction was negative.

Admission.—For her ninth pregnancy she came to hospital on October 29th, 1934, from the ante-natal clinic, where her history was elicited, and, as far as one could judge, her last menstrual period had occurred about February 17th. Examination showed the child to be an R.O.A., and the foetal heart was heard. Her pelvic measurements were small —namely, inter-superior iliac cristal, 9½ inches, inter-superior iliac spinous, 7½ inches, and external conjugate, 6¾ inches. (The average Jaluo woman's measurements are 10 inches, 8 inches, and 7 inches.) After she had been in hospital for over a month, and being then overdue, she was given, on December 7th, an ounce of castor oil and ten grains of quinine—the latter three times a day for three days—unsuccessfully. On December 9th she complained of having pains in the abdomen, and was found to have slight uterine contractions. On examination the foetal heart was normal and sound, the position of the child being still R.O.A. On December 10th she said that the pain had ceased.

Labour.—At about 1.30 a.m. on December 12th she went into labour properly, and on examination the child was found to have rotated completely, a vaginal examination showing a double footling presentation. The child was delivered easily, except for the head, which would not come through. On the application of forceps, however, it was delivered quite easily, but apparently the head was damaged—I imagine before the forceps were applied—and in spite of the application of artificial respiration and the injection of a 10 per cent. saline solution into the rectum, the heart had ceased to beat after a couple of hours, without the child having breathed normally. Necropsy showed an intracranial haemorrhage. The patient made an uninterrupted recovery.

COMMENT

My points are that it was remarkable: (1) that the child should rotate so near the time of the birth; and (2) that this woman should have had four footling presentations. Although the history was difficult to obtain from the woman, she was definite about the footling presentation, using the Luo word "tialo" (leg) rather than the word "pir" (buttocks), which would have been her way of describing a breech.

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Reviews

BRITISH PAEDIATRICS

The third edition[1] of Garrod, Batten, and Thursfield's *Diseases of Children* has been edited by Dr. THURSFIELD and Dr. PATERSON. For them the new book must be regarded as a triumph. The term "new" is justified in that nearly every section has been rewritten and new chapters have been added. In many places fresh methods of setting out the facts have been chosen, so that the whole tone conforms to modern ideas. But the editors' triumph comes not so much from bringing out an efficient, up-to-date work on paediatrics as from the fact that they have welded the new work of former contributors and the sections written by the newcomers into a whole, which is unmistakably "Garrod, Batten, and Thursfield." To those who have grown up with the book and who have come to rely on it to help them with a difficult case or a difficult lecture, the change over to this edition will cause no discomfort: it is the same old friend rejuvenated and in a new suit of clothes.

It would be impossible to discuss fully all that has been added to—and subtracted from—the book. Though there are seven new contributors and eleven fresh chapters, the amount of printed matter has been increased by fewer than a hundred pages. The chapter on the newly born baby adds a great deal to the value of the book. Here there are set out many of those pieces of information which formerly were missing or scattered: physiological data, the maladies peculiar to the first few weeks of life, and details about the proper management of an infant. The subject is dealt with on such sound lines, and is presented in such an attractive form, that one must forgive the author for calling the newly born baby a "neonate." The scope of the article on teeth has been greatly extended. Its interest is enhanced by the inclusion of a description of orthodontic methods. An answer can be found here to many of those questions asked by parents about their children's teeth, questions which most doctors know that they themselves cannot answer. The chapter on blood transfusion is new. Transfusion has become an increasingly important therapeutic measure during the last five years, so that a practical description of methods and application is to be welcomed. This account is given with a forthright dogmatism which adds much to its usefulness, even if it leaves one a little in doubt whether everything is quite as simple as it sounds. The newly written essay on heredity comes first in the contents, its logical position. This is a lucid statement of the facts relating to the subject and of the hypotheses built up from them. In the later part of the book the chapters on rheumatism, tuberculosis, and syphilis provide an impressive study of disease processes in children. Tuberculosis and rheumatism have been dealt with afresh, and these chapters are worthy companions to the others.

Perhaps no section illustrates the advance in ideas during the time between the second and third editions so well as that on nephritis. The same author has dealt with the subject in both editions, yet most of the nomenclature, as well as the whole method of thinking about the matter, seems to have altered in the meanwhile. It would be interesting to know whether the author ever regrets that the pursuit of truth has led him to abandon the simple classification and description of 1929. Curiosity is stirred on other minor points throughout the volume. Why are some authorities accorded initials and others

[1] *Diseases of Children.* Edited by Hugh Thursfield, D.M., F.R.C.P., and Donald Paterson, M.D., F.R.C.P. Third edition, with contributions by thirty-six authors. London: Edward Arnold and Co. 1934. (Pp. 1,152; 277 figures. 50s. net.)

denied them? In the references on page 873, out of eleven authors cited nine are without initials, while of the twenty-three on page 846 all have them except four. This small inconsistency occurs in many places. Why, too, with a fresh contributor writing a new article on pink disease, was it thought good to keep that unhappy coloured plate? Except for this, it must be admitted, the illustrations have been overhauled and many additions have been made. The aptness with which they have been chosen, and the quality of their reproduction, add not a little to the success of the book. Last, but not least important, the third edition has a new index. The less said about the index of the second edition the better. Here is one which is useful and complete.

Although, in what has been written above, emphasis is laid on the additions to this book, that is not to say that it is a thing of the moment. It contains that body of knowledge of children's diseases which will endure, even though as time passes it becomes incomplete. This work is one for those medical practitioners who wish to own something which will be useful to them for the rest of their days.

RECENT ADVANCES IN NEUROLOGY

The "Recent Advances" series has already secured a place on every medical bookshelf. The volume under review is the third edition of *Neurology*,[2] the first edition of which appeared in 1929 and the second in 1930. So extensive have the advances in this subject been during the last four years that this edition is almost half new material. One of the most active neurological studies at the present time is that which concerns itself with the neurotropic viruses, those filterable agents which show an affinity with the nervous system. The authors, Dr. RUSSELL BRAIN and Dr. E. B. STRAUSS, discuss the principle responsible for all the forms of herpes and encephalopoliomyelitis and the possible relationship between them. The sharp outbreak of encephalitis in St. Louis, U.S.A., during 1933 is reviewed; this is of particular interest, because the causative organism is believed to have been isolated. Another neurotropic virus has been obtained from a fatal case of acute ascending myelitis, described by Sabin and Wright. The victim was a young medical research worker, and his loss to science is perhaps to some extent mitigated by the valuable observations made on his case. The virus obtained from his brain, spinal cord, and spleen reproduces in rabbits all the features of his disease. Recent investigations of the louping-ill of sheep have thrown considerable light on these obscure enemies of the nervous system. Another subject which has been largely rewritten in this issue is injury to the brain, in the course of which the significance of concussion and contrecoup is reviewed.

Pathology is represented by sections on the histology of acute disseminated encephalomyelitis, the relationship with infantile cerebral diffuse sclerosis, and the classification of intracranial neoplasms. The application of physiology to neurology in recent years has been largely concerned with a study of the hypothalamus, which is rapidly attaining considerable importance in general medicine. The hypothalamus is undoubtedly concerned with water and sugar metabolism, but its relation with the pituitary is still obscure. It can affect the metabolism of fats and, probably indirectly, sexual development and growth. It has an important influence in temperature regulation, and its influence on the alimentary canal has been rediscovered in recent years, although first described by Schiff in 1845. There is new work to be recorded on the significance of the frontal lobes in connexion with spasticity and the grasp reflexes, and with the behaviour of the bladder and its sphincters. Progress has been made in assessing the value of various forms of pyretic treatment in general paralysis, and of liver therapy in subacute combined degeneration. New methods of treating narcolepsy and myasthenia gravis are here reviewed. Other sections deal with the cerebellum, sleep, the cerebrospinal fluid, the pathology of the visual fibres, posture and tonus, and *x*-ray treatment of nervous diseases. The chapters, as is usual in this series, are well documented, and illustrated by well-chosen diagrams, photographs, and radiographs.

[2] *Recent Advances in Neurology*. By W. Russell Brain, M.A., D.M., F.R.C.P., and E. B. Strauss, M.A., D.M., M.R.C.P. Third edition. London: J. and A. Churchill, Ltd. 1934. (Pp. 442; 40 figures. 15s.)

THE ONODI COLLECTION

In his catalogue[3] of the Onodi Collection, now housed in the museum of the Royal College of Surgeons of England, Mr. T. B. LAYTON draws well-deserved attention to a remarkable collection of specimens, a study of which will be of value to anyone interested in disease of the nose and its accessory sinuses. This collection consists of specimens preserved in Budapest by the late Professor Onodi, and later purchased from his son, Dr. Stanislaus Onodi, by a number of British laryngologists, neurologists, ophthalmologists, and dental surgeons and presented by them to the College. The collection is still receiving additions to fill in the gaps. Mr. Layton has divided his catalogue into sections, the first two of which deal with the development and anatomy of the sinuses, and the remainder with the anatomical variations which may occur in each individual sinus. The text contains a number of illustrations from photographs by Mr. Seward of the College and from drawings by Mr. S. A. Sewell. In cases where one specimen has a bearing on others reference is made in the catalogue to those which should also be examined. The author, in his prefatory letter to Sir Arthur Keith, pens a sketch of the gradual evolution of the knowledge of the anatomy and functions of these structures, and reminds us how little is really known about them. He clearly defines to what regions should be applied the various anatomical names. He leaves in the mind, for example, no doubt as to what and where is an agger or an uncinate cell.

SURGERY OF REPAIR

In a little volume, which he aptly describes as an Introduction to the Surgery of Repair,[4] Professor LAUWERS embraces a wide field. He first deals with the repair of tissues, and after a brief discussion of the different methods employed in grafts of skin and of mucous membrane, including the most modern methods of Esser and Gillies, he discusses in turn the transplantation of fat, of fascia, cartilage, and bone, and gives a short note on nerve and vessel grafting. With true French logic the section ends with a discussion on blood transfusion, which is after all only a method of grafting the blood.

In the next section he takes up the much wider subject of the repair of organs. Commencing with the treatment of malformations of the face he passes on to deformities of the nose and then to the plastic repair of the ocular region, especially of the eyelids, and including the correction of deformities which may result from facial paralysis. A short section is devoted to deformities of the spine and the operations associated with the names of Hibbs and Albee, and the author then deals at some length with operations on the thorax, including thoracoplasty for

[3] *Catalogue of the Onodi Collection in the Museum of the Royal College of Surgeons of England*. By T. B. Layton, D.S.O., M.S., F.R.C.S. London: Headley Brothers. 1934. (Pp. 131; 50 figures.)

[4] *Introduction à la Chirurgie Reparatrice*. By E. E. Lauwers. Paris: Masson et Cie. 1934. (Pp. 80. 18 fr.)

the treatment of pulmonary tuberculosis, bronchiectasis, and chronic empyema.

The repair of hernia is discussed at some length, and this is followed by a section on the plastic repair of deformities of the penis. Gynaecology is represented in repair of perineum and of vesico-vaginal fistulae, and includes operations for congenital absence of the vagina. The orthopaedic problems of cicatricial deformities and arthroplasty are briefly discussed, and the volume ends with a short note on transplantations of organs.

It will be seen that an immense field is covered, any small corner of which might be worthy of a complete monograph. In each instance, however, the notes, though short, are very much to the point, and show not only very wide reading but extensive practical experience. Few surgeons, whatever their own particular branch, would fail to pick up some useful hints from this little volume.

THE HOUSING PROBLEM

By his book on *Housing Administration*[5] Mr. STEWART SWIFT fills a gap which has been very noticeable in recent years. Under the relevant Acts of Parliament health departments have to deal with many details of administration in relation to housing, most of them concerned with non-medical matters of which the medical officer of health has to be aware. It is almost impossible for a medical officer of health to keep himself informed of all the pitfalls into which authorities other than his own have fallen, or which they have succeeded in avoiding, and yet he has to be prepared to face keen cross-examination, at public inquiries or in courts of law, on his own views and procedure in relation to happenings elsewhere. This book very adequately meets his need. It deals fully both with law and practice and with the experience of the writer, and others situated like him, in connexion with every aspect of the housing problem. Where necessary, parts of the law, or of regulations, or of by-laws, are reproduced in full. Their meaning, as interpreted by judicial authorities, is explained, and the practical points which have arisen in their execution, especially since the inception of the five-years plan of slum clearance, are discussed clearly but briefly and with illuminating examples and illustrations. Specimen forms, which constitute such an important part of housing work, are given in great number, and, indeed, there is practically nothing of administrative importance that will not be found in this book. It is accurate in its facts, although a mild criticism made on page 59 of the two-persons-per-room measurement used in relation to overcrowding by the Registrar-General is hardly fair, since the latter never refers to it without carefully adding such words as "its use in the census implies no judgement whatever as to what in fact constitutes overcrowding." The book is fully annotated and indexed and in good literary style. It should prove indispensable to the health administrator.

MEDICAL ASPECTS OF HEREDITY

As stated by Professor Freiherr VON VERSCHUER, in his work on "Heredity-Pathology,"[6] the first steps in the practical application of genetics have already been taken in Germany. A law relating to the prevention of hereditary disease was passed in 1933, and the Minister of the Interior has recently issued an order for the notification of certain hereditary diseases. The notification is made to an official physician, whose duty it is to decide whether the case is one for sterilization. The case is thoroughly gone into, and the details of the family and personal histories of the patient are registered, so that the author foresees that, in the course of time, the accumulated information will serve as a basis for the estimation of the extent of hereditary predisposition in the entire population. In consequence of this enactment, not only does the Government need the assistance of specialists in hereditary disease, but it will be necessary for the general practitioner, who, as the family doctor, is in a favourable position for ascertaining personal and family histories, to possess a knowledge of heredity and hereditary disease. Professor von Verschuer's book is intended to serve as a bridge between the purely scientific aspect of heredity and its practical application in medical practice. A full and clear account is given of the theory of the subject, describing in the first place the laws of transmission on Mendelian lines, on mutation, on the influence of environment, and on constitution and predisposition; and secondly, the special pathology as exhibited in malformations and diseases of the organs. A list, covering sixty pages, is given of diseases and pathological conditions, with statements of what in each case is known as regards hereditary influence and the mode of transmission of the defects. In the practical part of the work the practitioner is instructed in the means to be taken to recognize the hereditary character of lesions, the rules governing the prognosis as regards transmission to descendants of dominant, recessive, sex-bound, and polymeric defects, and the kind of advice that the practitioner is in a position to give in the present state of knowledge as to the advisability of having children. Advice is also given for cases in which the problem of parentage is in question.

[5] *Housing Administration.* By Stewart Swift. London: Butterworth and Co., Ltd. 1935. (Pp. 432. 25s.)

[6] *Erbpathologie: ein Lehrbuch für Ärzte.* By Dr. Otmar Frhr. v. Verschuer. Medizinische Praxis, Band XVIII. Dresden and Leipzig: T. Steinkopff. 1934. (Pp. 213; 32 figures. RM. 8; geb., RM. 9.20.)

Notes on Books

Clinical Methods,[7] by Dr. ROBERT HUTCHISON and Dr. DONALD HUNTER, is now in its tenth edition, has been reprinted thirty-four times, and has lately entered on its ninety-fifth thousand, or about a third more than the total number of registered medical practitioners. Originally Dr. Hutchison and the late Dr. H. Rainy of Edinburgh brought out this familiar handbook in 1897, and now nearly everything has changed except the senior editor. The present edition has been thoroughly revised, and changes both of omission and addition made, especially in the chapters on the clinical examination of the urine and blood. Dr. W. Russell Brain has given help in the revision of the chapter on the nervous system, from which the reviewer learnt that Gordon's reflex is an extensor response to pinching the tendo Achillis in upper motor neurone disease and injury. Several new figures have been introduced into the text, and a successful coloured plate of the asbestos bodies found in the sputum of the victims of chronic industrial asbestos pneumonoconiosis has been added.

If evidence were needed of the increasing popularity of *Black's Medical Dictionary*[8] it would be found in the fact that although the last edition, completing 87,000, appeared less than fifteen months ago, it is now exhausted, and a new edition, the twelfth, has become necessary. Dr. COMRIE has used to the full the opportunity thus afforded to bring the work up to date. Many articles have been largely rewritten—for example, that on endocrine glands has been extended, and now gives more detailed information concerning the secretions of the ovaries and testicles. New charts have also been introduced and vital statistics brought up to date.

[7] *Clinical Methods: A Guide to the Practical Study of Medicine.* By Robert Hutchison, M.D., LL.D., and Donald Hunter, M.D., F.R.C.P. Tenth edition. London: Cassell and Co., Ltd. 1935. (Pp. xiii + 658; 21 plates, 142 figures. 12s. 6d. net.)

[8] *Black's Medical Dictionary.* By J. D. Comrie, M.A., M.D. Twelfth edition. London: A. and C. Black, Ltd. 1934. (Pp. 1,004; 507 figures, 2 coloured plates. 18s. net.)

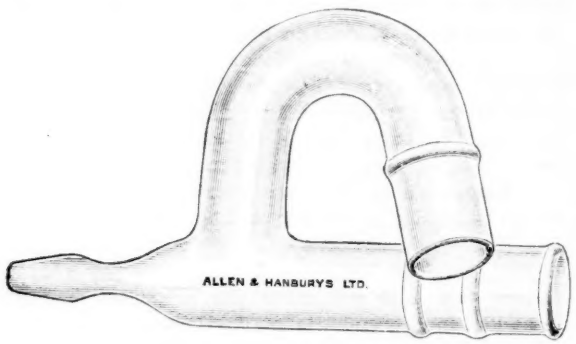
Preparations and Appliances

INUNDATION WINDOW FOR COLONIC IRRIGATION

Dr. F. A. HORT (London, N.W.8) writes:

Any apparatus designed to wash out bowel contents by irrigation will inevitably tend—the more so the more effective the apparatus—to lead to constipation, inasmuch as (1) the normal protective residual debris is thereby washed away, and (2) the natural function of defaecation is supplanted by artificial means.

The glass contrivance shown in the accompanying figure, which differs from those commonly used in irrigation only in that the vertical limb is curved instead of straight, enables the operator to watch the effects of what he is doing, as the tide alternately ebbs and flows before him. By this means he is able to form some idea of the activity and general



condition of any section of the bowel under observation, and thus, by varying the temperature, amount, or strength of the solution he uses for inundation, to coax it to empty itself to the extent that he judges desirable.

The disorganized delicate reflex mechanism that controls the digestive processes is thus given a chance to right itself, which the drastic method of purging by drugs or irrigation can only further disorganize. By gentle inundation, with appropriate food and the avoidance of drugs, the most obstinate constipation, as well as the systemic intoxication with which it is generally associated, will invariably begin to give way for just so long as the bowel is not subjected to further irritation by unsuitable food, by drugs, or by any other direct interference with function.

The window is made for me by Messrs. Allen and Hanburys Ltd., Wigmore Street, W., who also supply a short straight window to use with it.

A HISTIDINE PREPARATION

The "larostidin" brand of histidine, which is a solution of *l*-histidine monohydrochloride, has been prepared by Hoffmann-La Roche Chemical Works Ltd. for the parenteral administration in peptic ulcer. The preparation is a 4 per cent. solution in 5 c.cm. ampoules, and the treatment recommended is the daily intramuscular injection of the contents of one ampoule. A course of treatment lasts for three or four weeks. This method has been recommended by Aron and Weiss of Strasbourg. They produced peptic ulcers in dogs by experimental methods, and found that these were relieved by injections of the amino-acid histidine. The method has been tried clinically by Bogendörfer,[1] Hessel,[2] and Bulmer.[3] The last-mentioned author treated fifty-two cases, and obtained satisfactory results in 58 per cent. The clinical difficulties in the treatment of gastric ulcer are aggravated by the economic difficulty of finding adequate in-patient accommodation for this common complaint. The histidine treatment, however, only involves the daily attendance of the patient for injection. If the early and favourable reports on this treatment are confirmed by longer experience it will constitute an important therapeutic advance. The material is expensive to prepare, and hence is costly (10s. for six ampoules), but this cost is small in comparison with that of surgical or medical in-patient treatment.

[1] Bogendörfer, L.: *Münch. med. Woch.*, 1934, p. 1270.
[2] Hessel, G.: Ibid., 1934, p. 1890.
[3] Bulmer, E.: *Lancet*, 1934, ii, 1276.

MATERNAL MORTALITY IN ROCHDALE

AN ACHIEVEMENT IN A BLACK AREA

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The refusal of the maternal mortality rate to respond to the strenuous measures which have been directed against it within recent years has created widespread disappointment and disillusionment. For this reason it seemed to us desirable that a study should be made of an area in which a deliberate effort to recast the maternity service has been followed by a dramatic fall in the death rate.

For a number of years the high average maternal death rates of certain towns in Lancashire and the West Riding of Yorkshire have been a matter of public concern, and a few years ago they formed the subject of a special investigation by the Ministry of Health.[1] In Yorkshire the towns with an average rate exceeding 5 per 1,000, and which were embraced within this official survey were Barnsley, Bradford, Dewsbury, Halifax, Huddersfield, Sheffield, and Wakefield. In Lancashire county boroughs with a similarly high average record are Bolton, Oldham, Preston, Stockport, Wigan, and Rochdale. The factors in these towns that have contributed to the creation and maintenance of a specially high maternal risk have, in general, been described as those which spring more particularly from such adverse economic influences as unemployment and poverty, undernutrition, improper housing, inability to provide adequate medical services, and so on, and the opinion has been frequently expressed that improvement could be expected only in so far as these economic disabilities were successfully dealt with.

The experience of Rochdale in respect of its maternal problem is of the greatest interest and importance in that it provides an example of a community effort which has resulted in a striking measure of success, and which, at the same time, has thrown a flood of light on the relative significance of the various factors that have been advanced to explain the persistently high rates of this and similar areas.

With the approval of the local authority of Rochdale and for the purpose of carrying out a personal investigation of this maternity effort we made a visit to the borough in January, 1935. Through the help of the medical officer of health, Dr. John Innes, M.D., D.P.H., we were enabled to interview those who are intimately engaged in carrying out the maternity services. Further, we had an opportunity of studying, in most instances in considerable detail, the circumstances leading up to the deaths that occurred during the three years prior to the arrangements introduced for the improvement of the maternity services which it was our special object to study—that is, from 1929 to 1931; also the deaths occurring during the three years 1932 to 1934—that is, since those arrangements have been in existence. We thus had at our disposal data on which we were able to form an

opinion both of the extent and of the nature of any change that had taken place during the years under review.

Origin of the Rochdale Scheme

Before giving the results of this study and of the general impressions created in our minds by our visit, we must outline the genesis and the nature of the Rochdale scheme. We have already referred to the unenviable position which Rochdale, in company with neighbouring towns, had long occupied in regard to maternal mortality; so sinister, indeed, was this record that over the five-year period 1925–9 the death rate, averaging 8.33 per 1,000 live births, was one of the highest in England and Wales.

The new policy in respect of Rochdale's maternity service owes its inception to the medical officer of health, Dr. Andrew Topping, who assumed duty in October, 1930. In his annual report for 1930 he makes the statement, which is significant in view of subsequent events: "An enlightened community should not be willing to allow their town to rest under the stigma of being the town with the very worst record in the country." Since 1932 the administrative guidance of the scheme has been in the hands of Dr. Topping's successor, Dr. Innes.

From a study of the clinical records available in respect of the women who had died from puerperal causes during the preceding years, Dr. Topping concluded that the factors contributing to the fatalities could, in the main, be divided into two groups: (*a*) those which arose from imperfect supervision of pregnancy, so that women with complications failed to receive treatment sufficiently early to safeguard them against danger; and (*b*) those which arose from inadequate obstetric care during the course of labour. It was found, for example, in Group *a* that deaths were occurring from toxaemia, ante-partum bleeding, pelvic contraction, etc., in women whose abnormality was allowed to progress to the point of danger before the institution of adequate therapeutic measures. In Group *b* there were cases in which ineffectual and damaging attempts at instrumental intervention had been made, and in which, on review, it was clear that a greater regard for safety would have led to the withholding of such artificial intervention altogether, or, in those comparatively few cases showing evidence of potential or actual obstruction to labour, to an early removal to hospital, where the necessary treatment could have been carried out under conditions of safety difficult to attain in an ordinary home.

It is significant that the analysis of the individual death records failed to reveal any evidence for the view that the high death rate of Rochdale could be attributed in an appreciable degree to factors arising directly out of the economic disabilities from which, as a highly industrialized community, this borough, in common with its neighbours, was naturally suffering during the years of the investigation. In other words, the investigation showed, in the majority of the cases, the existence of obstetrical factors which in many instances were capable, with considerable justification, of being regarded as preventable.

Focusing Local Interest

Having arrived at these conclusions the medical officer persuaded the public health department of Rochdale to address itself to the steps necessary to improve those aspects of the maternity services which the analysis had proved to be inadequate. With the help of the chairman and secretary of the local Division of the British Medical Association, meetings of the general practitioners in the area were held at which the facts were freely and frankly discussed. The interest and support of the medical profession and of the midwives were thus enlisted at the outset and, as will become apparent in the course of this statement, to this must be ascribed a large measure of the success that attended the subsequent efforts.

The next step was, by means of all available agencies, such as the platform, the pulpit, and the Press, to awaken the community to an interest in the subject. By the use of appropriate propaganda, in which the Health Week was utilized, the people of Rochdale were informed in a manner that was throughout frank but at the same time tactful, of the medical facts. It was represented that to safeguard themselves the women should make use of the ante-natal clinics; they should at once report to their doctor or to the clinic at the first sign of abnormality; and they should refrain from attempting to coerce the doctor or the midwife to adopt measures to hurry the process of labour in a manner of which their judgement disapproved. We have ascertained that in this propaganda campaign the local press and those religious and other societies which had a platform to offer, such as the churches, the factories, etc., all played an important and willing part.

A circumstance that must be regarded as contributing in no small measure to the degree in which Rochdale has managed to improve its serious obstetric position is to be found in the relatively limited extent of the area to be dealt with. With a population of 90,000 and a maternity service which, in its various aspects of administration, personnel, hospital, etc., forms a unit of moderate size, it was relatively favourably situated for the initiation and maintenance of a public health effort of this kind.

Facts and Figures revealed by Investigation

The accompanying table (Table I) shows the official maternal death rates of Rochdale during the six years embraced by this investigation.

TABLE I.—*Detailed Analysis of Maternal Deaths*

Year	Live Births Registered	Deaths ascribed to Pregnancy and Childbearing	Rates per 1,000 Live Births Registered	Deaths not classed to Pregnancy and Childbearing, but returned as associated therewith
1929	1,295	12	9.26	6
1930	1,245	12	9.63	2
1931	1,151	9	7.80	2
1932	1,135	2	1.76	4
1933	1,044	3	2.87	1
1934	1,156*	5	4.33*	1
1929–31	3,691	33	8.90	10
1932–34	3,335	10	2.99	6

* Uncorrected figures only available for 1934.

We have already stated that we had an opportunity of studying the causes of death in all the fatalities occurring during the years 1929–34. From our previous investigations of this nature we realized that in an inquiry of this kind it was necessary to consider not only the deaths ascribed by the Registrar-General to puerperal causes, but also those deaths occurring during pregnancy and childbirth which had been classed as due to some intercurrent disease. On going through the latter group we found seven cases in which there were serious obstetrical complications that could be regarded as factors of primary importance in leading to the death of the patient. As an example we would mention the case of a woman suffering from influenza who died from eclamptic convulsions. We thought these cases could be more appropriately considered as due to childbirth for the purpose of this inquiry, and, after reallocating them, we arrived at the data given in Table II.

TABLE II

Years	Live Births Registered	Deaths due to Pregnancy and Childbirth	Rates per 1,000 Live Births Registered	Deaths due to Intercurrent Disease
1929–31	3,691	37	10.0	6
1932–34	3,335	13	3.9	3
1929–34	7,026	50	7.1	9

It will be noted that during the years 1932–4 there has been a striking reduction in the total deaths and in the death rate. According to the Registrar-General's figures the reduction was from 8.9 to 2.99 per 1,000 live births. On the basis of our modified allocation it was from 10 to 3.9. The numbers upon which this investigation is based are small, and, standing individually, the variations shown under the separate items might justifiably be regarded as due to the operation of chance. Taken together, however, we have satisfied ourselves of the inadequacy of such an explanation. In Table III we have set out the causes numerically in relation to the two periods which are the subject of comparison.

TABLE III.—*Numerical Analysis of Individual Causes of Death and the Rochdale Percentages compared with those given by the Departmental Committee*[2]

	1929–31	1932–4	Total	Percentage	
				Rochdale	Departmental Committee
Sepsis	10	6	16	32	38.6
Eclampsia	3	1	4	8	13.6
Other toxaemias ...	2	1	3	6	6.2
Operative shock, etc. ...	7	2	9	18	9.0
Ante-partum haemorrhage	2	1	3	6	7.8
Post-partum haemorrhage	4	1	5	10	5.7
Embolism	3	0	3	6	7.0
Abortion and mole ...	5	1	6	12	10.5
Extrauterine pregnancy	1	0	1	2	1.2
Total	37	13	50	100	99.6

In the column under 1932–4 it will be seen that there has been a reduction of the deaths under each cause as compared with the corresponding data for 1929–31. Despite the smallness of the figures, the evidence, when studied in this way, is very striking, and it serves to confirm a fact which is borne out by all such investigations—namely, that the standard of a maternity service is expressed throughout all the spheres of this service. The more efficient the practice the more safe does ordinary childbirth become and the larger the proportion of truly normal cases. But this increased safety is not limited to the normal. It embraces the complicated cases also, so that among these fewer patients succumb from sepsis and there are fewer deaths from the toxaemias, obstetric shock, ante-partum and post-partum bleeding, abortion, embolism, and so on.

The tables exemplify these principles in an impressive way when we compare the numbers of women in the two periods who died after operative intervention. Thus in the period 1929–31 there were seven deaths from obstetric shock, whereas from 1932 to 1934 there were only two. The same facts are brought out from the clinical records, which reveal that during the first period five women, and during the second period only one woman, died after the "failed forceps" operation. It is significant, also, to find that whereas during the one interval as many as seven women died after Caesarean section, during the other there were only three deaths after this operation. The comparative figures in relation to post-partum haemorrhage, embolism, and abortion, though smaller, are equally significant.

From these facts and the study of the case records during the two periods we are led to conclude that the conditions that existed after the "drive" were more favourable to the management of the cases in accordance with nature. We regard this finding as of the greatest significance, in that it demonstrates how in Rochdale, by the operation of a simple effort, backed by the good will of all concerned, this aspect of the problem was rapidly improved.

Analysis of the Primary Avoidable Factor

By the analysis of the "primary avoidable factor" in each case in a manner similar to that employed by the Departmental Committee on Maternal Mortality and Morbidity[2] we have adduced evidence of an indirect kind which points in the same direction. The primary avoidable factor was defined by the committee as the first significant and preventable circumstance recognized in the train of events leading to the fatal result. Out of the thirty-seven deaths during 1929–31 a primary avoidable factor was distinguishable in nineteen (51 per cent.), whereas during the years 1932–4 we obtained such evidence in only four (31 per cent.). It is easy to understand that from clinical records compiled after the event the detection of the circumstances responsible for the fatal issue is often difficult. In general, in a series of cases the more grossly the management departs from sound principles the easier is this detection and the larger will the proportion be in which the primary avoidable factor is revealed. This is well exemplified by the series of records which we have had under review. The larger percentage figure for 1929–31 is to be related to the fact that during this period the factors that directly led up to the fatal issue were relatively more obvious and gross in their character.

Changes in Routine Midwifery Service in Rochdale

We found further evidence of the change which had occurred in the routine midwifery service of Rochdale from the records of the local maternity hospital. During the last three years there had been a marked general reduction in the number of cases admitted late in labour. Although there was no rise in the total number of births in the hospital, women with complications noted during pregnancy and labour were being sent, in increasing numbers, to hospital at a stage when the condition was capable of being treated with greater safety. In this connexion it is worth recording that the local hospital is available for the use of all the doctors practising in the area, who are permitted to take in, and to treat their own patients. Over thirty general practitioners habitually make use of this privilege, and we are informed that this arrangement works satisfactorily. It is significant to find that out of 1,927 births in hospital during 1929–31 there were sixteen deaths, while out of 1,800 births in hospital during 1932–4 there were only six deaths.

From these discoveries we are justified in concluding that a considerable part of the success of the effort is to be traced to the improved practice of the doctors and midwives of the area. We may state, incidentally, that we satisfied ourselves that no appreciable part could be attributed to any change in personnel. In greatest measure we believe that the change had its origin in the anxiety of those concerned to review in the frankest possible manner the principles which had previously guided their practice after their attention had been directed to the causes of the sinister position occupied by their town in the realm of maternal welfare.

At the same time, while we believe that the evidence is such as to warrant the conclusion that in this way we can account for the chief influence making for betterment, it is also true that the strenuous efforts made by the public health authority, on the one hand, to enlighten the women on the need for submitting themselves to supervision, and, on the other, to provide the clinics and personnel for this purpose, were of great moment. The extent of the influence of ante-natal supervision is difficult to gauge with any accuracy, because it is of such a nature that, when properly directed, it pervades the whole body of obstetric practice. It can be most easily assessed in the degree in which it succeeds in alleviating the risks attendant on such complications of pregnancy as the toxaemias, and it is perhaps significant that during the " pre-drive " era the deaths from those causes numbered five, whereas in the " post-drive " period they numbered two. The general conclusions under this head, however, to which we were driven from the evidence at our disposal were that the greater attention paid to ante-natal care was relatively unimportant as a direct factor. We found no evidence in the bad years to indicate that defective ante-natal care had contributed in a major way to the increase of maternal risk.

We believe, however, that a great influence has been exerted by the women themselves in leading to the creation of a maternity system which has brought greater security during pregnancy and labour. We believe that the intensive efforts made in Rochdale to enlighten the women on these matters by the frank dissemination of information have played a profound part in raising the standard of service. It has undoubtedly led them to seek advice in order to safeguard their health during pregnancy, and to solicit medical aid more quickly now that they realize the possible dangers of bleeding, severe headaches, sickness, etc. It has, in addition, brought to their notice the dangers that may attend instrumental delivery, and has tended to discourage the belief, which so often prejudices both the peace of mind and the practice of the practitioner, that the best doctor is he who can deliver them most quickly. Finally, by exerting a continual moral pressure, it has inspired those directly engaged in the maternity services—the public health authority, the doctors, the midwives, the health visitors, and the hospital authorities—to greater efforts in their attempt to build up a system more worthy of their town. It is said that a country gets the Government it deserves, and it has sometimes likewise been stated that a community obtains the medical service it deserves. There are few who will deny to the doctor and the nurse a zeal for service which is not inferior to that possessed by any other organized body engaged in serving the public weal. At the same time it cannot be gainsaid that, like all such institutions, the standard of its work is influenced by the degree in which it receives moral help and inspiration from those whom it serves.

Conclusions

The experience of Rochdale provides an impressive and valuable example of an area which, by a deliberate effort, has achieved a reduction in its maternal death rate by a method that is capable of being applied with success in other centres. The success of this effort has arisen primarily from the circumstance that it had its origin in the public health department of the borough, which was in the position of being able, in the first place, to obtain the relevant facts, and, in the second place, of supplying the administrative machinery required for the inception and the development of the changes called for in the maternity services. In addition, the success may be traced to the mutual co-operation between the public health authority and all those engaged in the maternity services—the doctors, the midwives, the hospital, etc. Further, we are of opinion that great importance is to be attached to the propaganda campaign inspired by the public health department, by which there was carried out a wide and frank dissemination of relevant information throughout the borough.

It is important to observe that the results were obtained by a change of spirit and method and without any alteration in the personnel or any substantial increase in public expenditure. Further, the reduction in the mortality rate took place during years of continuing industrial depression, and there is no evidence to correlate it with any change in the economic conditions obtaining throughout the area.

Our investigations have impressed us with the importance of a full inquiry by a responsible body into the circumstances leading to the maternal deaths in an area as a means of discovering the ways in which the standard of service may be raised. The advantage of such a survey carried out locally we believe to be so great that we strongly suggest that it should become part of the routine practice of each administrative area.

We are fully aware that, unless carried out with circumspection, such an inquiry concerning individual deaths in a restricted region may readily come to assume the characters of a judicial tribunal. We are convinced that were the inquiry tainted with even the suspicion of such a function it would be undesirable, and would tend in many cases to operate unfairly in introducing irrelevant and unfortunate matters relating to personalities. Further, we are convinced that this would quickly destroy the value of the procedure, in that it would discourage frankness and willing co-operation, which are essential to the success of the scheme.

We believe that to remove any such risks and to ensure the most efficient working, the death records for this inquiry should be prepared by the medical officer of health in a form similar to those submitted to the Ministry of Health ; that they should contain no proper names of persons ; and that they should be examined periodically by a committee consisting of a general practitioner, an obstetrician, both obtained from outside the area, and the local medical officer of health. The general practitioner and the obstetrician should be selected because of their known interest and experience in the special aspects of the problem. A report prepared by such a body would be of the greatest value for the information and guidance of all those locally concerned with the administration of the maternity services.

We desire to express our thanks to the following for the assistance they have given us during our investigations: Dr. Andrew Topping, D.P.H., senior medical officer, London County Council ; Dr. John Innes, D.P.H., medical officer of health, Rochdale ; Alderman Y. T. Dawson, chairman of the Public Health Committee, Rochdale Borough Council ; Dr. J. C. Jefferson, F.R.C.S., chairman, and Dr. L. Kilroe, secretary of the Rochdale Division of the British Medical Association ; Dr. H. N. Crossley, D.P.H., resident medical officer, and Miss H. Copeland, matron, Birch Hill Hospital, Rochdale.

REFERENCES

[1] High Maternal Mortality in Certain Areas, Reports on Public Health and Medical Subjects, Ministry of Health, 1932, No. 68.
[2] Final Report of Departmental Committee on Maternal Mortality and Morbidity, Ministry of Health, 1932, p. 13.

V. G. Alvarez (*La Med. Ibera*, January 19th, 1935, p. 89), who records his experiments on guinea-pigs infected with tuberculous sputum, comes to the following conclusions. The presence of tubercle bacilli is easily demonstrable in the infected animals, but this bacillaemia is never found before two months on the average. Splenectomy, on the other hand, hastens the progress of bacillaemia, probably owing to the fact that the animals which have undergone the operation become more susceptible to tuberculous infection.

British Medical Journal

SATURDAY, FEBRUARY 16th, 1935

THE REPORT ON FRACTURES

During the coming week ten thousand individuals in Great Britain will suffer accidental injury ; every week this year more than two thousand fractures and dislocations will be sustained. What proportion of that great army of victims will carry to their graves a shortened limb or a crippling deformity? The experience of surgeons specially expert in the treatment of these injuries proves that in not more than 1 or 2 per cent. is permanent disability inevitable. But unfortunately it must be acknowledged that the general standard of fracture treatment in Great Britain to-day falls far below the standard set by the experts, and many hundreds of next week's victims will never work again.

The report of the Committee appointed by the British Medical Association to investigate this problem is published in our *Supplement* this week, and the comparison between the results secured in organized fracture services with the general results secured throughout the country should at once command the attention of the reader. In one series of 276 patients it is shown that a higher standard of treatment and of organization might have avoided a wastage of no fewer than 168 working years. In these few cases £13,000 was paid unnecessarily in compensation, and the men lost over £22,000 in wages. Such a state of affairs in its social aspect is a tragedy to the individual and to his family ; in its economic aspect it is a tragedy to the community, for the cost must be borne by the community. The problem, therefore, is that of the prolonged disability, as well as that of the permanent disability. As a rule the surgeon responsible for the treatment of fractures is also the surgeon who, in dealing with congenital and paralytic deformities, must visualize reconstructive treatment of many years' duration, and it may be that there is sometimes a tendency to underestimate the importance of the time factor. Nevertheless, in the case of bone and joint injuries undue delay in recovery can usually be avoided by anticipating and by preventing complications ; as a rule the most rapid recovery is also the most complete. It is often maintained that the primary reason for unduly prolonged incapacity periods is the operation of the Workmen's Compensation Acts. That non-medical factors, and particularly the attraction of settlement by lump sums of money, play an important part is freely acknowledged in the report of the Committee. It is well, however, that these factors should have been relegated to an appendix of the report: such considerations must not be allowed to mask the imperfections of surgical treatment which frequently underly them. The fact that a man who is not in receipt of compensation will resume work despite the discomforts of an imperfectly reduced fracture does not justify the imperfect reduction. If the man had been in receipt of compensation his return to work would probably have been delayed. But in such a case the delay must be attributed not so much to the factor of compensation as to the factor of imperfect treatment.

The importance of the relatively trivial disabilities that may remain after fractures and dislocations has been emphasized in recent years. It is not enough that the fracture should be firmly united in perfect position: muscle development, joint movement, freedom from recurring oedema, and freedom from adhesion formation are of equal significance. In the past, unqualified practitioners have flourished owing to the relative indifference of medical men to these terminal phases of treatment. That the reproach may still be levelled in certain cases is evident from the experience of Dr. H. E. Moore, the surgeon of the London Midland and Scottish Railway. At the Crewe rehabilitation hospital large numbers of men have been admitted whose treatment elsewhere has been concluded and who still maintain their inability to work. In these cases disability periods have been prolonged and perpetuated through trivial disorders capable of complete relief by two or three weeks of active treatment. Such cases provide the strongest possible argument for the establishment in every industrial area of rehabilitation centres, where graduated occupational and recreational therapy may prepare workmen for the stresses of heavy manual labour, and supplant the necessity for the " light work " which is so constantly unavailable and so frequently unavailing. While it is encouraging to find that moves are already being made to establish rehabilitation centres, care must be taken that they do not become the modern counterpart of the old massage department, which too often degenerated into a dumping ground for fractures in which the surgeon's interest had vanished. Remedial centres will prove no less futile than massage in curing complications which should never have arisen.

The prevailing note of the Report of the B.M.A. Fracture Committee is a criticism of the standard of fracture treatment in Great Britain to-day. The amazing truth is that, in many hospitals, fractures are still admitted under the nominal charge of surgeons who take little or no interest in such cases, and who willingly delegate them to the care of inexperienced house-surgeons. Having been discharged from the ward, no further interest is taken in the recovery of the patient, and he is either left to his own devices or is transferred to the care of an entirely different staff in a massage department. In dealing with fractures continuity of treatment is of the first importance. The disabilities of the terminal stages of convalescence must be recognized in their incipient form in the first days of treatment, and no improvement can be anticipated until in every general hospital the whole of the treatment of fractures, from first to last, is supervised

by one and the same surgeon, who is, moreover, interested and experienced in such work. There is no real difficulty in the establishment of such a routine, and the recommendations of the report are based on the firm ground of proved results in organizations such as those established in Liverpool by Mr. Watson Jones and in Manchester by Mr. Harry Platt. The organization of the Liverpool Royal Infirmary is capable of supervising the treatment of as many as 2,000 fractures a year with a relatively small staff, and despite the large numbers of cases under treatment the supervision is so close that permanent and prolonged disability is reduced to a negligible minimum. With the wider acceptance of the principles of the report and of the details of organization which are recommended, we may look forward to the day when fractures no longer prove a fruitful source of crippling and of deformity, and when they represent little more than incidents in the life of active individuals.

THE PROVISION OF A SAFE MILK SUPPLY

Few reports of recent years can have received such general approval as that issued in May, 1934, by the Cattle Diseases Committee. It will be remembered that this committee was appointed by the Economic Advisory Council and had Sir F. Gowland Hopkins for its chairman. After a very thorough review of the incidence of tuberculosis in cattle and of tuberculosis of bovine origin in man the committee made certain recommendations, chief among which were the proposals to eradicate bovine tuberculosis by the establishment of tuberculosis-free herds, the institution of a veterinary service organized for the control of cattle diseases in general and tuberculosis in particular, the laying down of a fixed standard of cleanliness which all milk destined for human consumption should attain, the compulsory grading of all liquid milk, and the granting to certain local authorities of permissive powers of compulsory pasteurization. This report has now been considered by a number of different bodies interested in human and veterinary hygiene, and its conclusions have been very largely endorsed.

It is of particular interest to note that the National Association for the Prevention of Tuberculosis, in a memorandum which it has lately issued,[1] likewise expresses its agreement with the main findings of the Cattle Diseases Committee. The association takes a wide view regarding the menace of tuberculosis, and realizes the necessity of facing it from every angle. It is convinced, by evidence accumulated from many sides, of the great frequency of tuberculous disease in milch cows and of its passage from these animals to man. Impressed by the nutritional importance of cow's milk for human beings, the association realizes that a demand should now be made for the production and distribution of milk on a nationally co-ordinated basis. The time is past for a chance and random supply of milk, the quality of which is dependent on accidental conditions of time, place, and traditional usage. "While it is most desirable in the interests of coming generations that a greatly increased consumption of milk should be encouraged—which incidentally would be to the financial interest of the dairy farmer—the public cannot reasonably be urged to its increased use, unless appropriate steps be taken to secure that the milk is (1) produced and distributed under cleanly conditions, and (2) free from the danger of conveying tuberculosis." This is the crux of the problem—the dependence of increased milk consumption on the provision of a clean and safe supply. The association is in general agreement with the methods for eradicating tuberculosis from cattle. The process of eradication, however, will necessarily take time, and meanwhile the public is exposed to grave risks from an infected milk supply. It is therefore proposed that a controlled system of pasteurization should be initiated, and continued until the eradication of tuberculosis is well under way, special attention being paid to the necessity for effective supervision of the pasteurizing process. The achievement of an adequate, clean, and safe supply of milk is of national importance, and the association expresses the hope that the Government will provide liberal financial assistance towards this end.

Coming as it does from a body in such close touch with the laity, this memorandum should prove of the greatest value in educating those concerned in local government to the urgent desirability of improving the milk supply. The association quite rightly restricted itself to tuberculosis of bovine origin. It must be remembered, however, that tuberculosis is merely one of numerous milk-borne diseases, and that it is very doubtful whether it will ever be possible to provide towns with a safe milk supply without recourse to pasteurization. This warning is needed to prevent misunderstanding. In insisting on the adequate pasteurization of liquid milk for human consumption, we shall be doing no more than following a practice that has already proved in Canada and in the United States to be of the utmost value in the control of milk-borne disease.

[1] Tavistock House North, Tavistock Square, W.C.1.

YELLOW FEVER: EPIDEMIOLOGY AND PROPHYLAXIS

It has now been recognized for some years that aerial transport is capable of disastrous results in the distribution of disease, whether by introducing vectors, such as mosquitos, into new localities far distant from their original habitat, or by conveying passengers with such rapidity that an infection acquired in one country may not develop until some time after they have landed in another. One of the great problems of the tropical hygienist in which these possibilities have to be considered is the susceptibility of India and Asia generally to attack by yellow fever. All the necessary conditions for a grave outbreak appear to exist: a highly susceptible and dense population, an animal reservoir of infection in the monkey, and the presence of the appropriate vector, *Aëdes aegypti*. At only one point

is there fortunately some doubt of the efficiency of the available mechanism: there is some evidence that the Indian race of this mosquito is less readily capable than the African of conveying the disease. In an interesting review of the situation Dudley[1] points out that insect vectors cannot establish themselves in fresh localities if their habitat is already occupied. This in the case of *A. aegypti* is the restricted one of water storage containers in human habitations, which it presumably found vacant when yellow fever invaded South America and the West Indies from Africa in the seventeenth century. But in India this breeding ground is occupied by the local race of this mosquito, and if its capacity to transmit yellow fever is in fact much less than that of the African race, then the continued existence of Indian *A. aegypti*, so far from being a source of danger, is actually a safeguard against the establishment of much more dangerous conditions. The control of yellow fever in endemic areas demands an elaborate organization. A recent account of the preventive service in Brazil[2] makes astonishing reading. A staff of no fewer than 10,024 workers is constantly employed in the Federal district of Rio de Janeiro alone, maintaining a regular weekly house-to-house inspection: the water in cisterns, drains, and even vases is examined for larvae; grass is cut down which may conceal small collections of stagnant water, and discarded tins in which it may collect are perforated. When larvae are found the water is treated with petrol; large areas, such as ponds, are stocked with a small fish which consumes the larvae. It is to precautions such as these that the greatly reduced incidence of yellow fever in South America is due. Other measures are also being employed to combat the disease both there and in Africa. In order to detect cases which would otherwise pass unrecognized, a "viscerotome" has been brought into use which enables a layman to secure a portion of liver for examination, and it is required that such a specimen be secured from fatal cases of fever of less than eight days' duration. Meanwhile the recently introduced mouse protection test with human serum has made it possible to determine whether the disease has existed in any area within a period which can roughly be assessed by the occurrence of positive results at different age periods: extensive surveys by this method in Africa are reported.[3] But the most notable development which has proceeded from the laboratory study of yellow fever is that of prophylactic inoculation. There is no known exception to the rule that lasting immunity to a virus disease can be secured by the introduction into the body of attenuated living virus. While some such methods (those, for instance, which protect against small-pox and rabies) are among the longest-established methods of immunization we possess, others (such as that for canine distemper) have only recently been evolved after prolonged experiment. Several years of trial and error have culminated in the development of a method of immunization against yellow fever which, according to its first few results, is both safe and effective. It depends upon two discoveries: that a satisfactory immune serum can be produced in the horse, and that the affinities of the virus can be modified by passage in the brain of the mouse. Although this modified virus has been employed alone for the purpose of immunization, there is a risk both of producing an encephalitis and of disseminating the disease, since the virus enters the blood stream. The simultaneous injection of immune serum obviates both these risks without preventing the development of active immunity. The steps by which this method was arrived at are described by Findlay,[1] who has actually immunized one hundred persons in London. The advantage of this protection, even at a stage when comparatively few people can secure it, will be inestimable if only for those who seek to study the disease itself in endemic areas. At least it may be hoped that the tragedies of Stokes and Noguchi need not be repeated.

[1] *Journ. Royal Naval Med. Service*, 1935, xxi, 16.
[2] Ibid., 1935, xxi, 28.
[3] *Bull. Mensuel de l'Off. Internat. d'Hyg. Pub.*, Paris, 1934, xxvi, 2123.

THE HEART IN MYXOEDEMA

The recently introduced method of treatment of intractable heart disease by thyroidectomy has added to our knowledge of the state of the heart and circulation in myxoedema. In fact, it seems likely that myxoedema artificially produced in this way may become more common than the spontaneous variety; at any rate, many of the former kind are now in existence in America, and will probably be seen in increasing numbers in this country. Of two recent papers on the heart in myxoedema, one by D. Davis, A. A. Weinstein, E. F. Riseman, and H. L. Blumgart[2] concerns the variety produced deliberately, and in the other, by M. Campbell and S. S. Suzman,[3] a series of spontaneously occurring cases is studied. Davis and his co-workers first investigated the changes in heart size in twenty-two patients with congestive heart failure after they had been subjected to total thyroidectomy. In a majority there was an increase in the horizontal diameter of the heart of more than half a centimetre; in the others there was either no change or some diminution. It is to be noted that after the treatment congestive failure disappeared, a change which in itself would more or less decrease the size of the heart, and if the shrinkage from this cause is slight the effect of thyroidectomy in causing enlargement is more clearly seen. Eleven patients with angina pectoris were operated upon: in eight there was an increase in the cardiac diameter of more than 0.5 cm., and in the others there was no change. Four patients without heart disease were subjected to complete thyroidectomy, and in three of these there was an increase in the diameter of the heart. The changes in the size of the heart showed a relation to the degree of hypothyroidism which developed, the criteria of diagnosis for this condition being low metabolic rate, high serum cholesterol, clinical signs and symptoms, and low velocity of blood flow. The effect of thyroid extract was to cause some diminution in the size of the heart. After the disappearance of congestive failure caused by artificial hypothyroidism, the rate of blood flow may actually be less than it was before treatment, when gross failure was present. Electrocardiograms revealed that in a majority hypothyroidism was accompanied by

[1] *Bull. de l'Acad. de Méd.*, 1935, cxiii, 78.
[2] *Amer. Heart Journ.*, October, 1934, p. 17.
[3] *Guy's Hospital Reports*, July, 1934, p. 281.

reduction in the amplitude of the waves of the ventricular complex, but no changes were observed in the PR or QRS intervals. The results seem definitely to counter any view which regards the hypothyroid state as tending to produce heart failure or to aggravate cardiac damage previously existing. Campbell and Suzman, in their investigation of eight cases of myxoedema, note the low voltage of the waves in the electrocardiogram and the increased amplitude after treatment with thyroid extract. In addition, they find a widening of the QRS complex, which is reduced by the extract. They are also able to confirm the reduction in the size of the heart under thyroid treatment. They report one case of gross failure, in association with a basal metabolism of minus 26 per cent., in a hypertensive patient. Failure disappeared after a few weeks' treatment with rest and thyroid extract only. Nevertheless, from the absence of a clear picture of congestive failure in the other cases in this series, and from the results of the American workers, there appears to be no evidence that hypothyroidism or myxoedema can in itself give rise to congestive failure. The explanation of the change in the cardiac dimensions in these conditions is perhaps not fully understood, but an increase in body weight, with a raised diaphragm and a myxoedematous swelling of the heart muscle, may play a part. The diminished voltage in the electrocardiogram is probably related to altered electrical properties of the tissues, particularly the skin and subcutaneous tissues.

INFLUENZA IN FRANCE

France has been suffering acutely from *la grippe* since the middle of January. Accurate statistical information is not available, for the disease is not notifiable in France. If it were, it is easy to imagine how distressing would be the emotions of the conscientious medical practitioner called on to distinguish more than a hundred times a day between a banal acute catarrh of the upper respiratory tract and genuine influenza. An approximate estimate of the fatal ravages of the present epidemic can be made only when the returns are available for the deaths from pneumonia and allied diseases. But this will take some time. Meanwhile, the evidence available from other sources indicates that, though the morbidity rates have been impressively high in many quarters, the mortality rates have been well below those of some thirteen years ago. In Paris the staffs of several hospitals, including the British Hertford Hospital, have been severely depleted. Many schools have suffered so severely that they have had to be closed temporarily. If newspaper publicity is a reliable index, the present epidemic would seem to have a special predilection for the Army. Certainly there have been many outbreaks in different barracks, and some cases have ended fatally. The French War Office has for some time deemed it expedient to issue daily bulletins on the subject, and the information from this source is to the effect that the epidemic is definitely on the wane. The prophylactic measures adopted by the Army medical authorities have doubtless contributed not a little to the limitation of the epidemic. From the provinces come reports of postal services dislocated, schools closed, and individual families losing two or more of their members. Three brothers have died in one family, and, in another, husband and wife died within a few minutes of each other. The present epidemic has not been characterized by any unusual clinical manifestations. It is the old story of vague aches and pains, including headache, fever, and involvement of the upper respiratory tract. Pharyngitis and otitis have been common, and cases simulating meningitis have not been rare. The abdominal type of the disease has not been prevalent this time.

"A BIG BIOLOGICAL ENGINEER"

The work of Sir Alexander Houston, director of water examinations for the Metropolitan Water Board from 1905 until his death in 1933, deserves to be placed on adequate record by someone who can speak with expert knowledge of his highly specialized achievements. In the absence of a more extended memoir, a reprint has been made from "Obituary Notices of the Royal Society of London" (No. 3, December, 1934) of the appreciation of Houston which appeared above the initials "M. H. G." It is not difficult to identify the writer as Dr. Mervyn H. Gordon, consulting bacteriologist to St. Bartholomew's Hospital, and the association with Bart's is a happy one, because it was in Klein's laboratory there in the late 'nineties that Houston saw the possibilities of bacteriology both in the analysis of sewage and in the service of a pure water supply, and the rest of his life was occupied in completing the task he then set out to perform. The scientific application of bacteriology for improving and safeguarding the purity of water was his life-work. In some respects Houston's career was as romantic as the great public service with which his name will be long associated, for by a series of happy occurrences and associations he was led from stage to stage in the evolution of his own ideas and researches, and was given the opportunity to put them into practical effect. The starting-point of his great work was the definite establishment of the fact that chemistry as usually applied was powerless to detect a degree of pollution of water with sewage which from the point of view of the bacteriologist would be considered gross in amount. Incidentally, as an illustration of the financial value of scientific research, "M. H. G." mentions that at the time when Houston took charge of the laboratories of the Metropolitan Water Board there was some uneasiness regarding the quality of London water on the ground that the river sources from which the bulk of it came were seriously polluted. It was even suggested that it might be desirable to obtain at enormous cost purer water from the Welsh mountains. Houston's careful and progressive studies of storage and chlorination rendered the supply from existing sources far safer, and not only disposed of the Welsh project, but also directly saved the Board a large sum of money. The staff journal of the Board, *Aquarius*, stated that in the ten years from 1916 the direct saving effected owing to chlorination amounted to at least £150,000, and the probable saving due to modified or new schemes of purification was possibly much greater still. It is also mentioned that in order to demonstrate his faith in the efficacy of storage Houston on ten occasions drank typhoid-infected water after it had been stored for some weeks. "M. H. G." traces in an authoritative way the work of Houston from its beginnings on the moorland gather-

ing grounds of some of the water supplies in the North of England to his long guardianship of the supplies of the metropolis, and shows him to have been, in Sir Walter Fletcher's phrase, "a big biological engineer."

INDUSTRIAL WELFARE

At the sixteenth annual meeting of the Industrial Welfare Society the chairman, Lord Invernairn, announced a gratifying rise in membership, indicating that appreciation is growing of the valuable services rendered to various industrial organizations. During the year ending June 30th, 1934, the advisory medical committee discussed at its monthly meetings such topics as accident proneness, the treatment of industrial injuries, the influence of hot and damp air on industrial workers, broken bones in industry, the return to work after illness, and the help which the medical profession could render to industry. For nurses entering industry a course of lectures is arranged. Conferences have been held on dermatitis and eye injuries, and a large number of inquiries from firms relating to sickness in industry have been answered fully. The income for the year increased and provided a sum for the extension of work, even though increased expenditure of a non-recurrent nature was involved by the transfer of the central offices to more convenient and commodious premises at 14, Hobart Place, S.W., and by the necessary enlargement of the staff. Co-operation with the National Safety First Association to provide accident-prevention posters and an information service for industrialists in all aspects of accident prevention has continued. The Duke of York, who takes an active interest in the work of the society, has visited several of the member firms. A special study was made of the problems of leisure, and consultations were held with representatives of firms and with many of the national bodies dealing with phases of this question which will take on more and more importance as time passes.

PARTIALLY SIGHTED SCHOOL CHILDREN

Arising from consideration of the report of the committee set up by the Board of Education to inquire into problems relating to partially sighted children, the Education Committee of the London County Council proposes that the children hitherto known as "partially blind" shall be designated in future as "partially sighted." There are 853 such children in the London special schools, and provision for their education is made in eleven schools, with thirty-six head and assistant teachers. Such children are selected for the special schools by a part-time consulting ophthalmic surgeon and a full-time divisional medical officer with many years' experience of ophthalmology. With regard to the standards of myopes, the committee of inquiry stated that no hard-and-fast rules could be laid down, but that it was desirable to formulate general principles in order to reduce divergence in practice. The principles set out by that body are to be adopted in London as far as possible. There are two main educational methods for dealing with partially sighted children: to place them in special schools (the London system), and to educate them in classes forming an integral part of the ordinary school (a system widely adopted in America, and, in this country, in Liverpool). From an educational point of view the system of self-contained schools has proved adequate, possibly owing to the comparatively small number of partially sighted children, which has enabled schools of fair size to be developed. The London schools for the partially sighted have provided a field in which a valuable technique of specialist teaching has been built up. The London Education Committee considers that, on the whole, the evidence quoted in favour of the non-segregational system, when viewed in the light of the special circumstances of London, is not of such weight as to justify a revolution in the efficient educational system which London has evolved for these children. The present system, therefore, is to be continued, though where there is difficulty, for any reason, in obtaining admission of a child to the special school, special teaching material may be provided in any elementary school. It is proposed to try the experiment of allowing children with a moderate degree of myopia and no serious changes at the back of the eye to read easily legible print of 18-point at a distance of about 14 inches. The lighting of classrooms, however, is first to have attention, and a trial is to be given to the modifications of the "Bishop Harman" desk recommended by the committee of inquiry to enable reading and writing to be done more at the level of the eyes.

"ART AND FASHION IN MEDICINE"

Sir Walter Langdon Brown, M.D., F.R.C.P., Regius Professor of Physic at the University of Cambridge, will lecture on "Art and Fashion in Medicine" in the Great Hall of the British Medical Association, Tavistock Square, London, on Tuesday, March 12th, at 8 p.m. The lecture is the seventh "Sir Charles Hastings Lecture," inaugurated by the British Medical Association for the purpose of offering to the public information by the highest authorities on matters of general public health interest. The chair will be taken at 8 p.m. by Lord Snell, Chairman of the London County Council, and after the lecture relevant questions, in writing, are invited. Admission will be free, by tickets obtainable on application to the Financial Secretary, British Medical Association, Tavistock Square, W.C.1. Seats not occupied by ticket holders by 7.50 o'clock will be available for other members of the public.

We have to announce with regret the deaths of Dr. James Collier, consulting physician and emeritus lecturer in neurology at St. George's Hospital, and physician to the National Hospital, Queen Square; of Dr. W. R. Dakin, formerly obstetric surgeon to St. George's and the General Lying-in Hospitals; and, at the great age of 95, of Dr. Milner Moore, who for many years took an active and prominent part in the work of the British Medical Association. We hope to publish obituary notices next week.

The American Medical Association and the Canadian Medical Association will combine for a joint annual meeting this year at Atlantic City, New Jersey, from June 10th to 14th. At the opening session Dr. James S. McLester of the A.M.A. and Dr. Jonathan C. Meakins of the C.M.A. will deliver their presidential addresses.

TREATMENT IN GENERAL PRACTICE

The two articles printed below form part of a series on the management of some of the major medical disorders met with in general practice

ACUTE PULMONARY OEDEMA

BY

ALBERT RAMSBOTTOM, M.D., F.R.C.P.

The exudation of serous fluid into the alveoli and alveolar walls of the lungs is commonly met with as a chronic condition when for any reason the myocardium is debilitated. This form of oedema is a passive phenomenon, and affects the bases of the lungs. It is characterized by crepitations at the bases of both lungs, with or without impairment of resonance, but never with actual dullness on percussion, unless, as in severe cases, it is associated with hydrothorax. Such oedema calls for no treatment beyond that which is necessary for the underlying disease. In old people it may be present in a minor degree for many years without of itself giving rise to any apparent inconvenience.

More rarely oedema of the lungs appears as an acute condition attended with imminent danger to life, and in consequence calls for urgent treatment. This acute form of pulmonary oedema may occur in the course of certain fevers and in Bright's disease ; it may complicate pneumonia ; and it may follow ether anaesthesia or paracentesis thoracis, particularly if the fluid is withdrawn quickly. It may also be due to the inhalation of irritating fumes, and in consequence was frequently seen in "gassed" cases during the war. In a well-marked form acute pulmonary oedema is most frequently met with as a spontaneous condition in elderly people suffering from cardiovascular degeneration, and is not uncommonly associated with a high blood pressure. It is generally held to be due to failure of the left ventricle, while the right ventricle continues to pump blood into the lungs, thus causing undue tension in the capillaries. Probably toxic degeneration of the capillary walls is an important contributory factor.

Symptoms and Signs

The onset is sudden. The patient is seized with urgent dyspnoea and pain or discomfort in the chest, at times associated with a feeling of impending death. He is cyanosed and extremely restless. The most characteristic symptom, however, is a very troublesome cough accompanied by frothy (sometimes blood-stained) expectoration —so copious at times that it may issue from both nose and mouth, and may even choke the patient. Rarely the oedema of the lungs is so severe that death may take place suddenly before any expectoration is brought up. Examination reveals crepitations over the whole chest, with little or no alteration in percussion.

The condition has to be distinguished from coronary thrombosis—in which the pain is more intense, the patient is pale and often perspiring, and there is no expectoration —and from pulmonary infarction—in which the pain is unilateral, and the expectoration does not occur until later and is more blood-stained.

Immediate Treatment

The patient, if not already sitting up, should be propped up in bed, and hot-water bottles be applied to the feet. A hypodermic injection, consisting of morphine sulph. 1/4 grain, atropine sulph. 1/50 grain, and strychnine 1/30 grain, should be given. This serves to allay the patient's mental state, to check the expectoration, and to stimulate respiration. There is sometimes a reluctance to give morphine in "cardiac cases," but experience has shown it to be well tolerated and extremely valuable. Should there be no appreciable diminution in the amount of expectoration in two hours a further dose of atropine sulph. 1/100 grain may be injected. If cyanosis is marked, or if the blood pressure is high—that is, above 170—venesection should be performed and 12 to 20 oz. of blood withdrawn from the median basilic vein. Oxygen, warmed by bubbling it through hot water, should then be administered continuously by a nasal catheter, secured in position by fixing it to the cheek with a piece of strapping. During this time frequent sips of brandy should be taken, and if the pulse is rapid strophanthin 1/100 grain injected intravenously. In the evening, after the patient has recovered from the shock of the acute attack and is feeling better, pil. hydrarg. 3 grains should be administered as an aperient, followed next morning by a hot seidlitz powder.

During the acute attack nothing should be taken by mouth beyond sips of brandy. When the attack has passed off the diet should be liquid, consisting of chicken broth, milk, Benger's food, peptolac, and other easily assimilated foods. Glucose is also helpful, and is best administered separately rather than added to the various foods, as in this way it is apt to sicken patients and interfere with their taking nourishment. A useful form is: glucose 1 lb., and water to 2½ pints—boil for fifteen minutes and allow to cool ; flavour with the juice of four oranges, and bottle. One wineglassful to be taken three times a day. At the end of three days, if there is no pyrexia or other contraindication, light solid food such as fish, chicken, custard, and stewed fruit may be ordered, and, if this is tolerated, the patient may be allowed to return gradually to a more normal diet.

After-treatment

Improvement in the patient's condition, if it is going to take place, is usually apparent in a few hours, and in those cases in which the oedema of the lungs has arisen as a complication of cardiovascular disease the patient may express himself at the end of three or four days as fit enough to get up ; but, on account of the liability to relapse, he should be kept at rest in bed for three or four weeks, and a mixture containing ammonium carbonate be prescribed:

℞	Ammon. carb.	gr. iij
	Ammon. chlor.	gr. iv
	Sod. bicarb.	gr. vi
	Aq. anisi	℥ j

Two tablespoonfuls in hot water three times a day.

If the pulse frequency is 100 or more it is advisable to give digitaline (Nativelle) 1/240 grain daily until the rate is in the neighbourhood of 70, when it might be discontinued ; but it should be resumed if the pulse rate rises. Afterwards the patient should be impressed with the necessity of taking things quietly by avoiding all undue exertion, both mental and physical. Recovery in this class of case is perhaps the rule in the first attack, but recurrences are frequent, and the patient usually dies in a subsequent attack.

In cases in which acute pulmonary oedema has complicated paracentesis thoracis the immediate prognosis is rather worse than in those in which it complicates cardiovascular disease ; but it is not liable to recur unless paracentesis should again become necessary, when it is advisable to remove the fluid very slowly and at the same time replace with air the fluid withdrawn. In pneumonia and Bright's disease the sudden supervention of acute pulmonary oedema is usually a terminal event.

MASSIVE COLLAPSE OF THE LUNG

BY

G. E. BEAUMONT, D.M., F.R.C.P.

Active or massive collapse of the lung generally occurs as a medical emergency either within twenty-four to forty-eight hours after an operation, which is frequently an abdominal one, or after some injury to the chest or leg, or as a complication during the later stages of diphtheria.

Symptoms and Signs

The patient suddenly collapses, complaining of difficulty in breathing and of a feeling of faintness. The symptoms are chiefly those of distress rather than of pain. When active collapse takes place after an operation the first step in the treatment consists in making a correct diagnosis. The sudden onset of dyspnoea, with rise of temperature, rapid breathing, and increased frequency of the pulse, are suggestive of consolidation of the lung, and resulted in an erroneous diagnosis of post-operative pneumonia until Pasteur clearly differentiated the condition in 1908. The correct diagnosis is established usually by the physical signs, especially noteworthy being the displacement of the heart towards the affected side of the chest. Active collapse of the lung in diphtheria may be mistaken for heart failure if the diagnostic features of pulmonary collapse are not borne in mind.

Prophylaxis

Treatment is both prophylactic and curative. The prophylactic treatment consists in frequent changes of posture when the patient is confined to bed, and also in the taking of a series of deep breaths for a few minutes periodically during the day and on waking, in order to expand the bases of the lungs. Tight abdominal binders after operations should be avoided. The inhalation of oxygen containing 5 per cent. carbon dioxide for a few minutes at the end of an anaesthetic also encourages the patient to expand the lungs.

Emergency Measures

The immediate treatment is concerned with combating the shock and collapse of the patient. For this purpose a subcutaneous injection of strychnine sulph. 1/30 grain and atropine sulph. 1/100 grain should be given, and repeated in four hours if required. Bandages constricting the lower part of the thorax should be loosened. The patient should inhale through a nasal catheter a mixture of oxygen and 5 per cent. carbon dioxide for several hours. Cardiac stimulants should also be employed. Some preparation such as cardiazol, 1 c.cm., or coramine, 1 c.cm., should be injected subcutaneously and repeated every six hours if necessary.

If these measures do not afford relief there are two alternative procedures: (1) introduction of a bronchoscope in order to aspirate the thick mucus which is sometimes found obstructing the main bronchial tubes ; or (2) introduction with a pneumothorax apparatus of 100 to 200 c.cm. of air into the pleural cavity on the affected side in order to raise the intrapleural pressure.

TREATMENT OF CANCER BY RADIUM

The Radium Commission has recently published a Preliminary Report on Radium Treatment in Cancer of Certain Sites.[1] In spite of the fact that it is only an interim report, this is nevertheless a document not merely of special but of general professional interest.

From time to time various attempts, upon a more or less limited scale, have been made to obtain some idea of the value of radium treatment in cancer ; in the present case the statistical inquiry has been made upon a national basis. The systematized records of national centres in the university towns of England, Scotland, and Wales, as well as those from regional centres in other parts of the country, have been laid under contribution. As already stated, the present report is preliminary in character, and it only deals with a three-year survival rate. This indicates no intention on the part of the Commission to deviate from its announced policy of basing statistical inquiries upon a minimum five-year survival rate, but rather a desire to place before the profession generally what results are being obtained by the radium treatment of cancer in three important regions of the body—the breast, the cervix uteri, and the buccal cavity.

All the cases here considered were treated in the first instance in the year 1930 ; the details have been obtained from the standardized record forms and "follow-up" documents. Not the least of the many services rendered by the Radium Commission, in collaboration with other bodies—King Edward's Hospital Fund for London and the Medical Research Council—has been the provision for obtaining standardized records of all cases of cancer which have received treatment at the various national and regional centres.

CANCER OF THE BREAST

The 557 cases dealt with are graded in three categories according to the extent of the growth. In the first this is limited to the breast itself ; in the second there is involvement of the axillary glands, while the third group includes those cases in which there is more widespread dissemination of the disease. It is an important but most unfortunate fact that 48.5 per cent. of these cases were in the third category at the time of applying for treatment ; of the remainder 30.7 per cent. of the total were in the second group and only 20.8 per cent. in the first. The methods of treatment were: (1) by radium alone ; (2) by combined radium and surgical excision ; and (3) by combined radium and high-voltage x rays, with or without excisional surgery.

Taking all the cases in which radium, in some form or other, was used, the three-year survival rate was 37.7 per cent. Separating the three groups of cases, the respective survival rates are: Group I, 64 per cent. ; Group II, 39.9 per cent. ; Group III, 24.9 per cent. As the report says, a three-year survival rate of 37.7 per cent. *for all cases treated* is encouraging. Equally, the importance of early diagnosis and treatment stands out with unmistakable distinctness.

In considering the relative values of excisional surgery and of radium treatment, there was a certain amount of difficulty in obtaining a series of cases treated by the former method which might be strictly comparable to the series treated by radiation methods. Such a series would be drawn from different areas of the country and treated by many surgeons in order to obtain the average

[1] Appendix to the Fifth Annual Report of the National Radium Commission. Preliminary Report on Radium Treatment in Cancer of Certain Sites. Prepared for the Radium Commission by R. W. Raven, F.R.C.S., and A. E. C. Hare, M.A., Ph.D. London: H.M. Stationery Office. (9d. net.)

results from pure surgical methods. No standardized series of this type was available, and so the results obtained in the treatment of carcinoma of the breast at St. Bartholomew's Hospital by purely surgical methods were used. The following table gives the percentage three-year net survival rates from radium therapy and from pure surgery ; the figures in brackets refer to the actual number of cases treated. It is admitted that the numbers concerned are too small for rigorous comparison, but they are of special interest as having both been compiled by the same responsible person—Mr. R. W. Raven, one of the joint authors of the present report.

Stage of Disease	Radium Treatment Alone	Radium Treatment plus Excisional Surgery	Excisional Surgery Complete Operation
I	67.7 (62)	50.6 (42)	65.4 (150)
II	40.2 (77)	42.6 54)	34.5 (244)
III	22.1 165)	38.7 (44)	—

In Stage I, where the growth is clinically limited to the breast alone, the survival rate is practically of the same order with radium treatment alone and with excisional surgery. In the group of cases treated by radium plus excisional surgery the survival rate is rather lower, but the number of cases treated is small and the difference of doubtful significance. In Stage II the survival rate from cases treated by surgical methods alone is appreciably smaller than when radium is used ; and in Stage III the better result is obtained when radium is combined with excisional surgery. In this last, and unfortunately too numerous, class the patients are in an advanced state of the disease and inoperable in the first instance ; the report states that " improvement in many of these cases is seen after radium therapy and they become suitable for excisional surgery. The results obtained in these cases are very encouraging, and it is significant that a higher survival rate is obtained in Stage III cases treated by radium combined with excisional surgery than in Stage II cases treated by excisional surgery alone."

THE CERVIX UTERI

In the 590 patients considered under this heading the primary growth was always in the cervix uteri, and cases of carcinoma of the body of the uterus and of the vagina have been excluded. As in the case of the breast, these cases have been graded according to the degree of extension of the disease at the time they were first seen. In Group I the carcinoma is strictly limited to the cervix uteri ; in Group II the disease is spreading into one or more fornices ; in Group III there is nodular carcinomatous infiltration of the parametrium on one or both sides ; and in Group IV there is massive carcinomatous infiltration of both parametria.

Even at the cost of using valuable space, we give the accompanying instructive table from the report.

Results Obtained in each Stage of the Disease with all Methods of Treatment in which Radium was Employed

Stage of Disease	Total Cases		Percentage Net Survival Rate at End of—		
	Number	Percentage	1st Year	2nd Year	3rd Year
I	123	20.9	85.8	74.4	60.8
II	148	25.1	75.8	57.0	48.1
III	241	40.8	61.6	47.9	32.6
IV	78	13.2	31.2	16.9	11.8

From the above it is clear that more than half of the patients treated were in an advanced stage of the disease at the time of applying for treatment.

The chief method of employing radium for treatment of carcinoma of the cervix is the Stockholm technique, or a minor modification of it. The effects of the minor variations cannot at present be adjudicated upon. In a number of cases (4.6 per cent.) the interstitial technique has been followed. Also it must be noted that radium has sometimes been supplemented (as it should be) by high-voltage *x*-ray therapy. A comparison of the effects produced by the Stockholm technique with those obtained by other methods is given in the following table.

Stage of Disease	Percentage 3-year Net Survival Rate	
	Stockholm Principle	All Other Methods
I	71.0 (62)*	48.1 (53)
II	54.4 (81)	38.0 (50)
III	33.3 (162)	20.4 (55)
IV	10.5 (57)	15.8 (19)

* Figures in brackets represent actual numbers of cases treated.

As regards survival rates, the figures given above show the very successful results obtained in this country by the Stockholm technique. It should, however, be mentioned that even hopelessly inoperable cases should be given the chance of radiation therapy, as the most extraordinary relief of symptoms may follow its application.

THE BUCCAL CAVITY

This group of cases includes those of the lip (94) and of the tongue and floor of the mouth (406). Here again, even in the case of carcinoma of the lip, where the trouble is manifest, we are again faced with the fact that patients are late in seeking advice, so that the risk of dissemination is vastly increased. In cases of lip carcinoma where the disease is strictly localized the three-year net survival rate is 75 per cent. ; if, on the other hand, the lymph glands are also affected this is reduced to 40.6 per cent. The importance of treating affected lymph glands is highly stressed.

Space forbids further discussion of this most interesting and informative document, which itself is so brief as to render adequate summarization impossible. This and its very modest price should make many, even busy, practitioners study it in its original form.

There is one further matter to which attention may profitably be drawn, and that is the widespread prevalence of the idea that results obtained in some centres are markedly better than in others. If this is not the case it would be well for it to be contradicted ; if it is the case it would be highly desirable, in the interests both of the public and of the profession at large, that the matter should be investigated by some competent authority, to which all the records are available.

The dean of the Royal London Ophthalmic Hospital (" Moorfields ") Medical School announces that the prize for the essay on " A Comparison between the Visual Results obtained by the Various Methods employed for the Treatment of Concomitant Strabismus," sent in for the Gifford Edmonds prize, has been awarded to T. a'B. Travers, M.B., B.S.Melb., M.R.C.P., D.O.M.S.Lond., F.R.A.C.S. of Melbourne, Australia ; and the examiners are of opinion that the essay sent in by Miss M. A. Pugh, M.R.C.S., L.R.C.P., was of high distinction and deserved honourable mention.

DIET AND CLIMATE

DR. CHICK'S CANTOR LECTURES

On January 28th and February 4th Miss Harriette Chick, D.Sc., of the Lister Institute of Preventive Medicine, gave two Cantor Lectures, on "Diet and Climate," before the Royal Society of Arts.

VITAMIN D AND SUNSHINE

In Lecture I—on the discovery of the antirachitic vitamin D and the influence of sunshine—Dr. Chick recalled the part played by sunshine in animal nutrition in controlling the metabolism of lime salts and phosphates. This discovery had emerged from studies on the aetiology of rickets in children, a disease in which there was defective retention of lime salts and phosphates and a disordered growth of bones. The researches of Palm (1890) on the geographical distribution of rickets, and of Raczynski (1912) on its seasonal incidence, pointed to sunshine as an agent in its prevention and cure, while the clinical work of Huldschinsky (1919) demonstrated the curative effect of radiation with ultra-violet light. Simultaneously the dietetic researches of E. Mellanby (1918–21) showed the nutritional character of the disease, the power of certain animal fats (butter, egg yolk, cod-liver oil) to prevent or cure it, and the impotence of vegetable oils. The antirachitic dietary essential contained in these animal fats was later called vitamin D. Experiments carried out by McCollum, Park, and others (1921–2) in the United States on rats fed on a rickets-producing diet proved that sunshine and cod-liver oil had an exactly similar effect in prevention of rickets, and these results received complete confirmation in the clinical researches carried out in Vienna after the Great War (Chick, Dalyell, and others, 1922–3). The explanation of this apparent anomaly was provided by the researches of Rosenheim and Webster (1925–7), and of Hess and Windaus (1925–7), which showed that the antirachitic action of the active fats depended on their content of ergosterol (pro-vitamin D), which was changed to an active form with antirachitic powers by ultra-violet radiation. Ergosterol was present in the fat of the skin, and on exposure to sunshine this substance was changed to vitamin D and absorbed through the skin just as preformed vitamin D in cod-liver oil or egg yolk was absorbed when taken as food. The importance of vitamin D, which secured the correct retention and metabolism of lime salts and phosphates, was evident, seeing that these elements were incorporated in early cell and tissue of the body.

The sun's antirachitic ultra-violet radiations were absorbed in the earth's atmosphere; hence the amount of these rays which was transmitted depended on the angle at which the sun's rays struck the earth. In temperate latitudes in winter the antirachitic rays were present in minimal amounts in sunshine, and reliance for a supply of vitamin D must be placed on the food. This explained the urgent need in winter, and especially for growing children, for butter, egg yolk, and cod-liver oil, which was the richest known source of this vitamin.

Osteomalacia in adults, the physiological analogue of rickets in children, showed the same seasonal incidence, and responded equally to cod-liver oil or sunshine. Its prevalence among women in some tropical regions was connected with social customs which keep the women indoors (for example, "purdah" in India, opium smoking and binding of the feet in China), combined with a poor diet and the extra strain involved in child-bearing.

DIET IN RELATION TO VARIOUS CLIMATES

In Lecture II Dr. Chick gave a survey of the ordinary foodstuffs, classified according to the method of McCollum as (*a*) *non-protective foods* rich in calories and providing energy (bread, sugar, cereals, vegetable fats), and (*b*) *protective foods* (animal fats, liver, cod-liver oil, dairy products, green vegetables, and fruit), which were valuable as containing protein of "good" quality and essential minerals and vitamins.

The carnivorous diets of the Esquimo and races of the Arctic regions, with large amounts of fish, meat, fat, and liver oils, were shown to be adequate for health and growth, and to have great advantages over diets consisting largely of cereals, such as were taken by many people inhabiting the tropical and temperate regions of the earth. The need for dairy produce (eggs, milk, butter) to supplement a vegetarian diet was pointed out. Examples were given of diets so supplemented which had proved satisfactory, and also of diets consisting largely of *cereal* products and root vegetables which caused nutritional diseases. The great advantages of milk additions to the diet of children in our own and in other countries were shown by the observations of Mann (1926) and Orr (1928), which the lecturer described in detail.

ECONOMIC PROBLEMS OF NUTRITION

Finally, the special problems of nutrition in our own country were shown to be largely economic, seeing that the "protective foods" were the expensive foods. The urgent need was to supply the population with a sufficiency of: (1) vitamin D, as eggs, herrings, cod-liver oil, in winter, to ensure healthy growth and prevention of rickets in the children; (2) of milk, to provide vitamin A, "good" protein, lime salts, and phosphates; and (3) of green vegetables, meat, eggs, liver, etc., as sources of "good" protein, of vitamins A, B, and C, and of iron salts for use in formation of blood and prevention of anaemia. The prevalence of anaemia among the poor mothers and young infants in this country was shown by the investigations of Davidson and others (1933) and of Mackay (1931).

Although the provision of a perfect diet was dependent upon adequate means, yet the spread of knowledge and popularizing of the less expensive of the "protective foods" should do much to improve the physique of the population of these islands.

England and Wales

New Ward Block at Hammersmith Hospital

The London County Council proposes to provide a further ward block at Hammersmith Hospital to contain accommodation on the ground and third floors for twenty-seven beds each, for surgical cases; on the first floor, twenty-two beds for gynaecological cases; and on the second floor, twenty-two beds for maternity cases, together with a babies' dormitory for fourteen cots and a sick babies' ward for three cots. The building will thus consist of a four-story ward block, with sun balconies on each floor at the south end. This is in addition to the extension of the hospital which has already been made in view of its association with the British Post-Graduate Medical School. It is realized that in consequence of that association the calls on the bed accommodation will be heavy. A new block has just been completed, bringing the total bed accommodation of the hospital to 394, with eighteen maternity cots. It was felt that this number would be insufficient for the needs of the hospital. Cases of peculiar difficulty will be transferred from all the council general hospitals to Hammersmith for investigation and treatment, since the standard at that hospital, as regards both medical staff and equipment, will be higher than at any of the other hospitals. The new ward block now proposed will bring up the total accommodation to 497, with twenty cots. The estimated cost of the new block is £42,000, and the additional annual costs of maintenance are expected to be some £13,000 or £14,000. Owing to the association of the Post-Graduate School with the hospital, the cost of the proposed new block will be greater than if it had been planned only to meet normal hospital requirements, and the school will be asked to make a contribution towards the cost of the building work

and the engineering services. The proposals are subject to a satisfactory arrangement being come to on this point. The London Voluntary Hospitals Committee has no observations to offer on the proposals.

Heatherwood Hospital, Asçot, to be Enlarged

A scheme has been prepared for the enlargement of Heatherwood Hospital, Ascot, which recently passed into the hands of the London County Council, whereby additional accommodation for 100 children suffering from surgical tuberculosis will be provided. Lord Mayor Treloar Cripples' Hospital at Alton has been visited, and the plans include features of that hospital which are considered advantageous for the treatment of such children. The arrangements provide generally for a new one-story double-ward block designed for open-air treatment. The front of the block will have glass shutters, so arranged that open-air treatment can be given in uncertain weather, and on brighter days the beds can be wheeled on to a terrace. Other new provision, especially for nurses, is being made at the hospital, and the total cost of the scheme will be £67,000.

New Shellfish Regulations

The Minister of Health has issued a circular to port and other sanitary authorities relating to the Public Health (Shellfish) Regulations, 1934, which came into force on January 1st, and which extend the provisions of the Regulations of 1915. Medical officers of health are now required to make investigations with regard to any "laying" from which suspected shellfish have been derived, and to make a report to the local authority. The authority, after consideration of it and of any representations made relative to it by persons interested, may then make an Order if it is satisfied that the consumption of shellfish taken from the laying is likely to endanger the public health. It may also attach to an Order such exceptions and conditions as it may think proper. This will enable a local authority to prescribe as a condition of the sale of shellfish for human consumption either re-laying in pure water, or sterilization by steam, or cleansing by a satisfactory process in an establishment approved by the Minister. A new requirement has been made that a local authority shall give notice to the appropriate Sea Fisheries Committee of any proposal to make an Order, and of any Order which may be made. It has been suggested to the Minister that, especially where an Order contains an absolute prohibition, the reason for making it should be definitely stated therein, so as to warn the public that shellfish in the prohibited area are polluted and unfit for human food. The local authority must inform the Ministers of Health and of Agriculture and Fisheries as quickly as possible of any action taken by it under these Regulations.

Pay-beds in London Hospitals

There is a growing demand for suitable hospital provision for those who, owing to modern developments in medicine and surgery, require hospital treatment with all its advantages, and who are able to pay the cost of their maintenance and also something for medical attendance. King Edward's Hospital Fund for London has now issued a revised edition of its pamphlet[1] which gives particulars of the provision made for patients from the professional and middle classes at voluntary hospitals in London. This shows a substantial increase in the number of beds, as compared with the accommodation available in 1928, when a special committee of the King's Fund inquired into the subject. The total number is now 1,871 at 107 hospitals. In the past fifteen years the accommodation has been trebled. It should be emphasized that the increase in the number of pay-beds is in addition to a much larger extension in the accommodation for patients in the ordinary wards of the hospitals. This pamphlet gives full particulars of the charges at each individual hospital, and further information can always be obtained from the secretary of the hospital concerned.

[1] Published for the King's Fund by Geo. Barber and Son, Ltd., Furnival Street, E.C.4. (3d. post free.)

Ireland

Diphtheria Immunization in Belfast

Dr. C. S. Thomson, medical superintendent officer of health, Belfast, in the course of his report to the corporation Maternity and Child Welfare Committee, stated that in 1933 there were 625 notifications of diphtheria in Belfast, with forty-seven deaths. The cost to the ratepayers of the nursing and isolation of each case averaged £20, on the basis of four weeks in an infectious diseases hospital. In 1933, 611 cases were treated in hospital, costing, according to this calculation, a sum of over £12,000. Dr. Thomson said that the treatment of individual sufferers from diphtheria had been very considerably improved in recent years, with the result that the death rate had been reduced over 30 per cent. to under 10 per cent. Notwithstanding this progress, the disease itself had proved an increasingly difficult problem; indeed, the ordinary public health measures for preventing the spread of infection were far from successful. In 1923 over 40,000 cases were notified in England and Wales; in 1930 there were over 72,000. If the public would co-operate with the medical profession in securing immunization against diphtheria not only would sickness and death be reduced enormously, but there would also be a great saving of the ratepayers' money. Under the heading of "Active immunity," with which process the report dealt at length, Dr. Thomson stated that active immunity resulted from the injection into the body of toxoid-antitoxin. This preparation was made from the toxin of diphtheria, which was first treated in the laboratory to reduce its toxicity, and then combined with antitoxin to prevent harmful effects. When this entered the blood stream it stimulated the body to produce its own antitoxin. The human body was active in producing antitoxin as the result of stimulus, and therefore the process was spoken of as active immunization. Several months were required before the body produced sufficient antitoxin of its own to resist an attack of diphtheria, but when once this was secured the person inoculated was rendered immune from diphtheria for at least sixteen years, and possibly for life. It was virtually useless to introduce a campaign of active immunization during an epidemic, because the latter would probably have subsided long before those immunized began to enjoy protection. Thus, if a local authority was satisfied that immunization should be introduced it should begin at once, and not wait for an epidemic. So clearly had it been demonstrated in all parts of the world that the majority of children between 1 and 5 years were susceptible to diphtheria that it was usual in immunization clinics to recommend immunization in all such children (except those who had had diphtheria) without a preliminary Schick test. Immunization could now be secured by giving one injection only; formerly three injections at intervals of a week of toxoid-antitoxin were required. Dr. Thomson recommended that a scheme for diphtheria immunization should be started in Belfast, and the committee, while recognizing the importance of the proposals, recorded that it could not see its way to act on the representations made unless it was assured that the

Ministry of Home Affairs would assist financially in giving effect to the proposals. The Ministry had the matter under consideration, and the committee, in compiling its estimate of expenditure for next year, had included a sum of £500 to meet the cost of a tentative scheme. It might, however, be forced to abandon the idea unless financial assistance was forthcoming from the Government. If the scheme comes to fruition a specialist will be engaged for a session each week at one of the corporation's maternity and child welfare centres, probably at Spier's Place, Shankill Road, and mothers will be invited to bring their children there to be inoculated. It was reported that up till 1930 the Ministry's contribution to the city's maternity services had amounted to 50 per cent. of the net expenditure, but since that time the Government's assistance had taken the form of a block grant of £3,608 (being based on the year 1930–1), notwithstanding the fact that expenditure on maternity services had progressively increased in recent years. The estimated expenditure for next year is £11,718. The committee has drawn the Ministry's attention to the departure from the previously accepted arrangement, and has stated that unless the original system of a percentage grant is reverted to, the committee will be obliged to abandon the idea of embarking on further schemes in the interest of maternity and child welfare.

Salaries for County Wexford Doctors

At a recent meeting of the County Wexford Board of Health a report was received from the committee which considered the application of the dispensary doctors. This report recommended that the doctors should have an initial salary of £250, rising by £10 increments to £325 ; that the county home medical officer should have a salary of £275, the maximum to be reached in three increments ; and that the maximum salary for the New Ross Hospital should be £275, to be reached by annual increments of £10. The matter of the county hospital surgeon's salary was deferred pending communication with him. The recommendations of the committee were unanimously adopted, and it is believed they will receive the sanction of the Local Government Department.

Scotland

Pathology in Glasgow

An extension of the department of pathology at the Western Infirmary, Glasgow, was opened on February 5th by Sir Robert Muir, professor of pathology in Glasgow University. Sir John A. Roxburgh, chairman of the board of managers of the Infirmary, presided, and said that the necessity for research was becoming more apparent as medical science progressed. It was therefore the duty of hospital managers to keep research accommodation and equipment up to date, and this applied especially to the department of pathology. The original pathological department of the Western Infirmary had been erected sixty years ago. The extension which was now being inaugurated had been made possible by a gift from the trustees of the late Mrs. Margaret Macgregor of Stirling, and would be named the Margaret Macgregor Memorial. Professor Sir Robert Muir, in his address, said it was a surprising thing that mankind should only so recently have taken up the study of scientific methods of the nature and causation of disease, which concerned its welfare so intimately. He was impressed by the fact that the increase in our knowledge had been very rapid since this study had been seriously undertaken, that its results had been highly beneficial, and that hospital equipment had been accordingly influenced by it. The essential basis of this remarkable advance in knowledge and in practice had been research. The stimulus both to individuals and to institutions should be not so much the possibility of making an important discovery as the opportunity of sharing in this progress. Investigators were like soldiers in an army, who could do little by themselves, but who, together, could attain much. There was one difference, however—that for investigators progress was assured ; and it was a comfort, in days when scientific research in one direction had brought the means of practically unlimited destruction, to look at the results achieved in another in the prevention and alleviation of human suffering.

Central Midwives Board for Scotland

The examinations of the Central Midwives Board for Scotland, held simultaneously in Edinburgh, Glasgow, Dundee, and Aberdeen, have just concluded, with the following results. Out of 152 candidates who appeared for the examination 131 passed. Of the successful candidates 29 were trained at the Royal Maternity Hospital, and 11 at the Elsie Inglis Memorial Hospital, Edinburgh ; 31 at the Royal Maternity Hospital, Glasgow ; 9 at Stobhill General Hospital ; 2 at the Eastern District Hospital ; 2 at the Western District Hospital ; 5 at Govan Maternity Hospital ; 12 at Bellshill Maternity Hospital ; 5 at the Maternity Department, Royal Infirmary, Perth ; 2 at the Royal Infirmary, Stirling ; 2 at the Deaconess Hospital, Edinburgh ; 3 at Barshaw Maternity Hospital, Paisley ; 3 at Motherwell Maternity Hospital ; 7 at the Maternity Hospital, Aberdeen ; 6 at the Maternity Department, Royal Infirmary, Dundee, and the remainder at various recognized institutions.

Carnegie Universities Trust

At the annual meeting of the Carnegie Trust for the Universities of Scotland, which was held in London on February 6th, under the chairmanship of Sir H. Arthur Rose, reference was made to several matters concerning medical research in Scotland. It was intimated that the capital value of the Trust since its inception had increased from £2,000,000 to £3,770,000 at the present market value of investments, and the income had increased from £102,000 to £131,500 last year. In the section of the report by the superintendent of the laboratory of the Royal College of Physicians of Edinburgh, which is supported by the Carnegie Trust, there was a reference to an investigation into the vital statistics of Scotland, and an extension of this inquiry into the vital statistics of other countries. From these investigations it seemed that the important factor from the point of view of the health of the individual during his whole life was his environment up to the age of about 15, after which age improved conditions had little direct effect. Better social conditions, therefore, appeared to have brought about their beneficial results primarily through their action on children. It was suggested that a reduction in infant mortality was dependent in large measure on improvement in maternal health. This explained why, apart from other influences, infant mortality lagged behind in its fall. The figures for Sweden had shown similar characteristic features, except that in the case of Sweden a disturbing force had begun operating about 1850, adversely affecting adolescents and young adults. Figures in regard to Holland were being studied at the present time, and it was also intended to make a study of death rates from particular diseases. Reference was also made in the report to a research by Mrs. E. K. Dawson on the pathology of tumours of the breast, in which an endeavour

is being made to correlate more definitely the microscopical findings in breast cancer with the clinical experience and the end-results of treatment from a critical examination of a large series of cases. Lieut.-Colonel W. F. Harvey and Mr. T. D. Hamilton have completed a medico-statistical survey of the variability of the blood picture from day to day in two individuals, one as representative of the normal and the other as an allergic asthmatic. This study has furnished a definite reply to the doubt that has been raised regarding the reliability of the blood count. A research has also been conducted by Dr. Kermack on the mechanism of the laevulose test of liver function.

Reports of Societies

BODY WEIGHT IN RELATION TO DISEASE

At the meeting of the Medical Society of London on February 11th, with Lord HORDER in the chair, a discussion took place on "Body Weight in Relation to Disease."

Dr. ROBERT HUTCHISON said that it would be agreed that there was no standard weight in health for a given individual. There was a certain Dr. Hutchinson, with whom for his sins he was sometimes confounded, who drew up such supposed weights for heights, and these were found on automatic machines at railway stations. As regards the individual, these were of no help at all, whatever their value in respect to the average. Any experienced clinician could tell by looking at a person whether he was above or below what ought to be about his weight. Nutrition was, after all, a clinical conception. The three great variables in the problem were water, fat, and muscle. Rapid fluctuations in weight could be put down to variations in water content. To such belonged the rapid loss of weight in diarrhoea and vomiting in infants and the vomiting of pyloric stenosis. In both these conditions the patient became dehydrated. A more gradual loss of weight through loss of water occurred in old age. Many old people desiccated, and, perhaps in consequence, became immune to microbic infection. In the same way some people who had lived long in the Tropics "dried up." Rapid gain in weight due to accumulation of fluid occurred in some cases of cardiac disease, particularly in what was called "alcoholic heart," where there was a condition of latent dropsy. The same thing occurred in starvation oedema, patients suffering from under-nutrition becoming oedematous; also after taking certain drugs to excess, such as bicarbonate of soda, and, he believed, iodide of potash, though he had not seen a case. Fat was a more important variable, and the third was muscle. It was impossible to distinguish clinically between loss of weight due to muscle and loss of weight due to fat, but the former was much more serious, being always accompanied by weakness, whereas fat loss was not necessarily so accompanied.

As to the diagnostic significance of loss of weight as the presenting symptom, the common organic causes were well known. In tuberculosis in young adults the first thing to attract the patient's attention might be loss of weight. It was sometimes the presenting symptom in diabetes, in latent carcinoma, and in thyroid disturbance not accompanied by conspicuous goitre. The functional causes of loss of weight included the obvious one of over-dieting—a thing to look out for in view of the craze for slimming amongst women—and this might also be true of patients who had functional indigestion and had been dieted by their doctors, whose instructions they had carried out too meticulously or too zealously, suffering more in consequence from the dieting than from the original indigestion. Nervous and mental causes had to be considered; the phrase "worn with anxiety" was literally true. Another important cause of functional loss of weight, particularly in young women, was anorexia nervosa, which the general practitioner did not seem to recognize, though it was not uncommon. Last of all the functional causes were the drug addictions, including the excessive use of tobacco.

As for gain in weight due to fat, he left the causes and effects of obesity to the speaker who was to follow him, saying only that he did not believe in the simple explanation that obesity was always due to excessive intake of food. There was an air of mystery about obesity, and even the endocrines did not seem adequate to explain it. Dr. Hutchison finally asked what were the advantages and disadvantages of being over or under weight. All life insurance statistics went to show that leanness and longevity were associated. The disadvantages of being under weight were shown in early life, when such persons were more liable to contract tuberculosis, though apparently not other types of infection. As for the disadvantages of overweight, the rotund person would roll faster down the hill of life, because obesity seemed to be associated with—not the cause of—pathological conditions, such as diabetes, some forms of renal disease, high blood pressure, and myocardial degeneration. All these were more apt to be found in people who had excess of weight, which also made them bad subjects in acute illness or operation. Acute bronchitis was not only worse borne by the fat individual, but he was actually more liable to its attack. Certain forms of acid dyspepsia were more apt to occur in people of excessive weight. There were also certain mechanical disadvantages to which the fat person was exposed. There was strain on certain joints, so that he developed arthritis of the knees and flat-foot. The advantages of excess fat were a good-tempered and less worrying disposition, ability to stand exposure to cold, and better resistance to wasting disease, the fat person being a well-provisioned city against siege.

Dr. H. GARDINER-HILL dealt with conditions in which overweight was the presenting symptom. It was usual to classify obesity into exogenous and endogenous, but he doubted whether that classification could really be made. Food intake alone, although an extremely important factor, was not sufficient to account for the exogenous cases. Nearly every case appeared to have an endogenous factor. In a very large proportion, perhaps 75 per cent., there was a family history of obesity. All that could be said of these cases was that they were suffering from obesity with an endocrine background. Some young children became fat because of excessive carbohydrates in their food; or they put on weight after measles merely because their mothers fed them up during convalescence. Many women put on weight in the course of successive pregnancies, and although an endocrine factor might be postulated, it was enough to say that they had been lying up for considerable periods and had had increased food intake. But obesity was found in association with true endocrine disease, most consistently in lesions of the pituitary or of the adrenal cortex. With regard to the sex glands, most castrates became fat, although he had collected notes of a number of women who had undergone double ovariotomy for one reason or another, and only 75 per cent. of them had got fat, the remainder becoming thin, or showing no change. The same result appeared in a series of cases of amenorrhoea, presumably due to some ovarian deficiency or secondary to changes in other glands. The part played by appetite in cases of obesity was enormous. In manic-depressive psychosis it was astonishing how the patient during the depressed phase lost all interest in food and went down in weight, while during the manic phase his appetite was stimulated and his weight went up even a stone or two above his normal. The overweight individual probably took a good deal of food and had a diminished energy expenditure. Such patients under observation lost weight on a reasonably low diet. Any individual who weighed 12 or 13 stone, if in bed without any muscular exercise, could lose weight at the rate of about one stone a fortnight. In the majority of cases of obesity the basal metabolism was normal. With regard to water metabolism, he had had in a nursing home a man weighing 24 stone; he was in for removal of the appendix, and after being dieted he lost a certain amount of weight and the operation was performed. Later he wanted to leave the nursing home for a night to attend a birthday celebration; he was weighed

before leaving, and on his return next morning he was found to have gained nine pounds. Inquiry showed that although he had not eaten excessively, he had indulged liberally in champagne. The speaker believed that in obesity it was not so much a question of glandular or other deficiency as of some excessive storage mechanism, generally inherited, but sometimes acquired as a result of excessive food intake or excessive alcohol consumption, or the result of some definite endocrine disease.

Lord HORDER suggested that there might be some controlling mechanism, other than endocrine interaction, in the central nervous system. Patients developing some organic disease of the central nervous system—tabes, for example, or disseminated sclerosis—sometimes gained weight rapidly, as did those with cerebral tumours. Sometimes with the same pathological process, the same main diathesis, there might be fatness in one individual and leanness in another. He had had the disturbing experience of putting fat patients upon a regime which seemed promising judging by its effect upon other obese persons, and seeing them gain weight instead of losing it. Again, what was the effect of exercise? He felt confident that sometimes the sedentary patient who was told to take exercise did not lose the weight expected from the change of habit, or even actually gained weight. Dr. J. W. MCNEE referred to the definite hereditary tendency to either fatness or leanness. Was there a clue in family history? He could only suggest that there was a tendency for people with a "thin" family history to be bigger protein eaters than others, and those who ran to fatness might be larger consumers of carbohydrate. Could there be some difference in oxidation as regards foodstuffs? Did some people utilize their food to the utmost, while others could not do so and stored it? Many fat people who were not of the obviously endocrine type had an absolutely normal basal metabolism. The fact that women put on weight after repeated pregnancies might be explained on the ground that their metabolism had been newly stimulated to store food for another individual, and after the need was over the stimulus continued. If a fat patient were put to bed on a diet of 1,000 calories he might lose five or six pounds in the first week, and after that very little more, though his weight was still greatly in excess. Exercise helped considerably, and he found that he was getting better results with out-patients, controlling their obesity with the help of the dietitian. With regard to susceptibility to illness, obviously fat people who were old were carrying a burden which made all illness more severe, but in youth he could hardly believe that there was a great difference between the two conditions, with the exception that persons who were fat and blonde—particularly females of that type—were particularly susceptible to microbic infection and took all infections badly—pneumonias, septic infections, and the like. Dr. F. PARKES WEBER said that it was true up to a certain point that thin people were more liable to tuberculosis. He recalled a girl who was suffering from anorexia nervosa, and was starving. She developed pulmonary tuberculosis, with tubercle bacilli in the sputum, but the anorexia nervosa was very soon overcome, whereupon she rapidly gained weight, and all signs of tuberculosis disappeared. On the other hand, young people with severe thyroid disturbance became almost emaciated, but did not as a rule develop pulmonary tuberculosis. There was a tendency now to talk rather slightingly of the effect of endocrine disturbances on organic disease, but that was not a wise attitude to adopt. Dr. P. H. MANSON-BAHR spoke of the effect of climate on body weight. He connected hot, steamy climates, such as the Congo, with obesity. It was extraordinary to watch from year to year the gain in body weight of young men who went out to the Congo. Generally, in a person who went out to the Tropics there was a preliminary loss of weight, followed, in certain climates, by a gradual gain. This might have something to do with the food as well as the climate; in certain parts of Central Africa palm-oil "chops" and "steaks" were considered delicacies. He also inquired as to any direct connexion between gain in body weight and sleep. Dr. LEVY SIMPSON said that so-called constitutional adiposity was in many, if not in all cases, a constitutional disposition of the endocrine glands resulting in adiposity. One could not fail to be impressed by the familial incidence of such adiposity endocrine disorders as Fröhlich's syndrome, adreno-genital syndrome, and Cushing's and Achard-Thiers's syndromes. Nor was it less important that, whereas one or more members of the family exhibited a complete clinical picture, other members showed only one or two features, and if presenting themselves individually would be labelled as "normal," or perhaps "idiopathic" adiposity. There appeared to be no endocrinological disease which did not present itself in a minor key in accepted normality. The fact that so many patients with adiposity showed no other gross pathological features was no disproof of endocrine factors, but an indication of the bluntness of present methods of investigation. It was true that the balance of the endocrine glands was initially determined by genetic or chromosomal factors, and in this sense the term "constitutional adiposity" was fully justified. He felt that the term "exogenous adiposity" needed qualifying in the sense that increased appetite, or increased appetite for specific articles of food, was sometimes determined by an endocrine background. In two women patients there had been such a craving for glucose for a few days preceding the menstrual period that no aesthetic or social consideration could prevent the eating of a pound of chocolates in twenty minutes. The increase in weight and retention of water at the time of menstruation was now established, even in a large percentage of normal women.

Dr. HUTCHISON, in reply, said that the question of inheritance was bound up with that of inherited habits of eating. The Scotch, for example, were bad fat-eaters, and on the whole were a thin race. It was not leanness as such that rendered a person subject to tuberculosis, but leanness due to defective fat intake. Fat protected from tuberculosis, but it was a question whether it was fat *qua* fat, or some fat-soluble vitamin, perhaps vitamin D. The question of sleep was important up to a point, but people subject to insomnia did not necessarily lose much weight. Dr. GARDINER-HILL, replying on the subject of climate, said that he had certainly seen quite a number of patients who had returned from a hot climate and in whom the basal metabolism was abnormally low, but they had no signs of hypothyroidism. These cases seemed to tolerate thyroid very well, and thyroid had a better result in these than in the ordinary familial case.

CLINICAL PATHOLOGY OF PLEURAL FLUID

At the annual meeting of the Association of Clinical Pathologists, which was held at the Royal Chest Hospital on January 26th, with Dr. NORAH SCHUSTER, pathologist to the hospital, in the chair, Dr. ROODHOUSE GLOYNE delivered an address on the clinical pathology of the pleural fluid.

Dr. Gloyne pointed out that cytological examination of pleural fluid was difficult if it was allowed to clot, and he advocated its collection in two tubes, one sterile for the specimen for bacteriological examination, and one containing a small quantity of 1 per cent. sodium citrate. The appearance of the fluid as collected offered valuable information; the presence of blood suggested a malignant growth. The specific gravity and the total protein were of importance in distinguishing between a transudate and an exudate; fluids showing less than 1.5 per cent. of total protein were probably transudates; while those in which the protein was above 3 per cent. were almost certainly exudates. For the examination of the cells Dr. Gloyne advised Gordon's modification of Pappenheim's stain. He expressed doubts whether the cells usually described as lymphocytes actually were such; they were characteristic of established tuberculous effusions. In the earlier stages polymorphs might predominate. Eosinophils might appear in the exudate in large numbers in traumatic haemothorax, after artificial pneumothorax, in association with malignant disease, and in the presence of an unresolved pneumonia. New growth cells were very difficult to distinguish from pleural endo-

thelial cells ; their cytoplasm was usually vacuolated, and the vacuoles contained a material staining yellowish brown with osmic acid. In regard to bacteriological examination the speaker emphasized the necessity of anaerobic as well as aerobic culture. Anaerobic streptococci, which gave rise to a particularly virulent form of pleural infection, might not, he said, be detected on simple aerobic culture. Tubercle bacilli could often be identified in films after careful examination, but would escape detection in many cases in which they might be found either by guinea-pig inoculation or by the use of Loewenstein's medium. Pleural puncture was a safe procedure, but he had experience of one case of severe haemorrhage and one of tuberculous infection of the needle track following it. Dr. Gloyne stated that the number of new growths of the lung met with in post-mortem examinations at the Victoria Park Hospital showed a steady increase, and was now 15 per cent. of all performed there. He had seen one case in which a troublesome local tuberculous infection was produced by the reinjection of tuberculous pleural fluid ; he deprecated the injection of pleural fluid until it had been passed through a filter and shown to be sterile.

Dr. ARTHUR DAVIES divided pneumococcal pleural effusions into the synpneumonic and metapneumonic. The appearance of the former coincided with the onset of pneumonic infection ; the latter appeared from seven to ten days after its establishment. The synpneumonic effusions were characterized by the presence of few pus cells and many organisms ; the metapneumonic by many pus cells and fewer organisms. The speaker pointed out that at the time of appearance of the synpneumonic effusions little reaction had occurred in the tissues, and that puncture at this stage might set up the dangerous condition of "mediastinal flutter." Milky fluids might be either chylous or pseudo-chylous. The former contained actual fat, and were almost invariably indicative of filarial infection ; the latter owed their opacity to material of a lipoid nature, and might occur in a number of conditions. He drew attention to the importance of infection below the diaphragm, as, for instance, the presence of an amoebic abscess in the liver as a cause of sterile purulent effusion in the pleural sac.

Dr. JAMES MAXWELL advocated the use of the rotanda syringe for the collection of pleural fluid ; by means of it almost any amount could be conveniently withdrawn at one puncture. Speaking of the appearance of pleural fluid, he cited one instance in which an artificially induced oleothorax had been mistaken for an empyema, one in which the instillation of methylene-blue had led to a diagnosis of pyocyaneus infection, and one in which puncture had resulted in the appearance of clear, watery fluid ; subsequent examination of this fluid showed hooklets and scolices, and established a diagnosis of hydatid disease of the lung. Dr. A. F. SLADDEN (Swansea) drew attention to the globulin test as a means of distinguishing between transudates and exudates. On flooding slide preparations of pleural fluids with 5 per cent. acetic acid transudates remained unaltered but exudates became coagulated.

The CHAIRMAN asked for information as to the nature of the "Foulis" cell. Dr. ROODHOUSE GLOYNE replied that he had searched the literature for information as to the nature and appearance of this cell, but had only found one short reference. Briefly he considered that the large cells with vacuolated cytoplasm found in the pleural fluid and usually described under this name were probably indicative of malignancy if the vacuoles contained lipoid material but not if the vacuoles were empty.

Dr. L. E. H. WHITBY described the direct typing of pneumococci. He pointed out that in the early stages of pneumonia, when typing was necessary, the sputum contained only a few pneumococci. In making preparations it was necessary to take four samples from one specimen of sputum. One of these was kept as a control ; the remaining three were well mixed with drops of I, II, and III typing serum respectively. The drops of sputum and serum were allowed to stand for from two to three minutes ; they were then covered with a slip, and examined microscopically. Pneumococci subjected to the action of their homologous serum showed swelling and opacity of the capsule. Dr. Whitby laid stress upon the fact that the examination was one requiring considerable skill and experience, and not to be lightly undertaken.

Sudden Death from Heart Disease

Dr. JOHN TAYLOR recorded the findings in 300 post-mortem examinations on cases of sudden death from cardiac causes. Males constituted three-quarters of the total, and only 8 per cent. of the total were below the age of 40 and only 9 per cent. over 80. Myocardial disease accounted for 56 of the deaths ; in this class Dr. Taylor included, with some trepidation, one case of what he could only describe as "status lymphaticus." Coronary disease was responsible for 116 ; in twenty of these there was rupture of the ventricle, in every case due to thrombosis of the left coronary. Valvular disease only accounted for twenty-four of the total. In one case death was due to "shock" following the introduction of soapy water into the pregnant uterus. Dr. SKENE KEITH found a very similar causal distribution in 110 cases of sudden death. He showed diagrams of the size, shape, and position of the heart made by plotting the cardiac outline upon the surface of a plate of glass superimposed upon the heart after opening the chest wall. These diagrams showed that the heart occupied a position differing considerably from that described in the text-books of anatomy. Dr. W. BARNARD attributed sudden death after coronary thrombosis to ventricular fibrillation. He pointed out that in those cases in which death occurred immediately on the establishment of a coronary thrombosis no evidence would appear in the heart muscle of the damage done ; histological evidence of infarction could not appear unless life were prolonged for some time. Dr. E. WORDLEY (Plymouth) described a case of sudden death in which, at the post-mortem examination, he had found widespread fragmentation of the heart muscle ; he inquired whether this was the cause of death or was a post-mortem phenomenon. The CHAIRMAN inquired as to the present opinion of "status lymphaticus." Dr. TAYLOR, in reply, stated that he believed fragmentation of the heart muscle to be a post-mortem phenomenon ; in view of his personal experience he could not do other than believe in the existence of "status lymphaticus."

Miscellaneous Communications

Dr. NORAH SCHUSTER described a comparative investigation into methods for the estimation of the sedimentation rate of the red cells. Dr. Schuster deplored the misplaced ingenuity that had gone to the modification of the original techniques of Fahraeus and Westergren, which she regarded as still being the best available. Using a capillary tube method she had found very irregular results. Factors influencing the rate of sedimentation were the bore of tube, the height of the blood column, the anti-coagulant, the degree of anaemia, the type of blood—whether venous or capillary—and the temperature. The height of the blood column was of great importance ; with a column of 200 mm. the level of the red cell column at the end of an hour depended solely upon the rate of fall of the cells ; with a 100 mm. column the additional factor of packing was introduced. Dr. Schuster pleaded for standardization of the technique in order that the results of different workers might be comparable.

Dr. C. E. DUKES, pathologist to St. Mark's Hospital, in the laboratories of that hospital showed specimens of carcinomatous rectums removed at operation. Dr. Dukes displayed graphs demonstrating the progressive deterioration in the prognosis occurring after the growth had passed through the mucosa into the rectal wall ; by investigation of the degree of invasion of the regional lymph glands he had been able to divide cases of carcinoma of the rectum submitted to operation into three prognostic categories.

Dr. EILEEN HARVEY, assistant pathologist to the Hospital for Consumption, Brompton, showed a large series of lung lobes successfully removed by surgery, and Dr. W. E. CARNEGIE DICKSON, pathologist to the West End Hospital for Nervous Diseases, demonstrated specimens of cerebral tumours and other brain conditions.

SILICOSIS IN BRITISH COAL MINES

The position of the disease termed silicosis as it occurs among workers in coal mines in this country was the subject of a paper by Dr. S. W. FISHER, H.M. Medical Inspector of Mines, at the annual meeting of the Institution of Mining Engineers on February 1st.

Dr. Fisher referred in particular to the cases of unusual lung trouble in South Wales. During the last seven months of 1934, of twenty-one deaths certified as due to silicosis, nineteen were in South Wales, and of 123 total or partial disablements 107 were in the same area. In the short space of from fifteen to twenty years the known incidence among workers in coal mines had grown from a few cases to over 700, and by far the greater number were in the South Wales field. The original cases were those of drill workers in siliceous rock, but many cases had now been certified in which it was not possible to trace a history of such work. Dr. Fisher's chief recommendations were that in view of the fact that damage to the respiratory system through bronchitis interfered with the dust-eliminating function of the lungs, men suffering from chronic cough or acute bronchitis should consult their doctor before taking up or resuming work in high concentrations of dust; that strict attention should be paid to mine hygiene, by way of dust traps, ventilation, the wearing of respirators, and provision for protecting the men from the cold intake air when, warm from their work, they were brought out of the mines in spakes ; and that research work should be undertaken into dust fibrosis of the lungs in coal miners, special institutions to be established for the purpose—neither sanatoria on the one hand nor simply convalescent homes on the other—where it would be possible to treat and to study cases needing prolonged care.

Professor LYLE CUMMINS said that he was accustomed to see the cases which had been described as silicosis in South Wales ; they were very grave cases, with serious and even tragic disability, whatever might be the causation. Certain reasons had led him to believe that these cases ought to be described as silicosis, though it might be safer to say that they were a form of pneumoconiosis. He had no doubt that stone dust was at the bottom of the disability. The condition only arrived at a serious disabling stage towards the end of a man's working life. Once the lymph drainage was impaired through stone dust, the dust, originally inert, became mechanically injurious in the lungs. Various elements of mine hygiene were not sufficiently taken into account. When injurious gases like nitric oxide were present in a dusty atmosphere much more than usual harm was done by silica dust. Nearly all the bad cases he had seen were among men who had worked with drills.

Professor J. S. HALDANE held that the cases officially described as silicosis among men who had not worked in highly siliceous rock were not silicosis at all, and to call them silicosis was to create unnecessary alarm and to divert attention from their real nature and from means of prevention. He thought they were primarily cases of either bronchitis or ordinary phthisis, the collections of dust with such extra fibrosis as was found post mortem or on *x*-ray examination being due to paralysis by bronchitis of the normal process of dust elimination. The chief reason which convinced him that the numerous cases of this class were not silicosis at all was that, while *x*-ray shadows and post-mortem appearances indicating dust accumulation and fibrosis of the lung were quite common among these colliers, there was no corresponding liability to tuberculous disease, the death rate from which was just about as exceptionally low among South Wales colliers as among others. The special frequency of these cases in the anthracite district appeared to be connected with the added risks of bronchitis due to the use of slants instead of shafts, and consequent exposure to great cold.

Sir KENNETH GOADBY showed some microscopical sections which had been made in connexion with the departmental inquiry some years ago into pottery lead poisoning, and illustrated the appearance in the lungs of animals which had inhaled various forms of frit—that is, lead compounded with silica. On examining these sections again he found in the alveoli definite silicotic nodules quite characteristic of the early stage of silicosis. This was in confirmation of what had recently been done by Irwin and his colleagues in Toronto with regard to preliminary production of bronchitic damage predisposing to silicosis. There did undoubtedly exist a class of fibrotic disease other than true silicosis.

Professor E. H. KETTLE said that he was unaware of any evidence that chronic bronchitis interfered with the elimination of dust inhaled into the lungs, and he did not see why it should. So far as he knew, in an ordinary chronic bronchitis persistent for years there was no alteration in the surface epithelium of the lung. Further, there was a very pronounced secretion of mucus, which helped to entangle dust particles on the walls of the bronchus, and one had only to think of the chronic bronchitic expectorating all day long to realize that the current upwards from the lung was, if anything, enhanced in chronic bronchitis, and definitely not diminished. He added that he differed almost entirely from Sir Kenneth Goadby on the interpretation he had placed on his sections.

Dr. W. E. COOKE of Wigan said there was no silicosis problem in the Lancashire coalfield, although sericite was present in large quantities in the mudstones and shales of the Lancashire mines.

Mr. W. R. JONES, D.Sc., of the Royal School of Mines, whose sericite theory of causation has lately attracted attention, said that the chief advocates of the free silica theory for the causation of silicosis, in seeking for an explanation of the localization of the condition in British coal mines, had brought forward the question of bronchitis. Professor Haldane apparently was willing to accept death certificates many years old, but not willing to accept the results of post-mortem examinations by pathologists of the medical boards under the Various Industries (Silicosis) Scheme, 1928. It was an undoubted fact that a certain number of cases of silicosis occurred in South Wales among miners who had never worked in silica rock. With regard to the presence of sericite in the shales of Lancashire and the absence of silicosis, it was necessary to remember that there were two kinds of sericite, one scaly and the other fibrous, and it was the latter type which was found in silicotic lungs.

Professor K. NEVILLE MOSS of Birmingham expressed the view that since silicosis produced lung impairment, this could hardly have been unnoticed in the past by general practitioners. The conditions of mining were much the same now as in former days, and he wondered whether the present liability of the Welsh miner to this form of lung trouble might not be explained by the lower standard of living in South Wales, and any slight distribution of cases elsewhere to the migration of the Welsh miner to other fields.

Dr. E. L. MIDDLETON, of the Factory Department, Home Office, remarked that it would be very difficult for mining engineers to take away from that meeting any concrete idea of what silicosis was. All that could be said was that there were two factors, the dust and the miner, and the immediate thing to do was to suppress the dust. He put it in the form of a slogan : " Take the dust out of the industry."

DIAGNOSIS AND TREATMENT OF COMMON MENTAL DISORDERS

At a meeting of the London Association of the Medical Women's Federation on January 22nd, with Dr. E. M. PICKARD, the president, in the chair, Dr. ISABEL WILSON read a paper on the early diagnosis and treatment of some common mental disorders.

Dr. Wilson said it would be logical to begin with mild symptoms of mental illness, or mild types, and work up to the more severe, but it was pleasanter to attack the problem the other way round so as to arrive at some discussion of the ways in which the general practitioner might deal with nervous or mental illness. Delusion was a serious symptom ; when expressed it was often con-

sidered merely silly or wrong by the relatives. It was for the doctor to look at it scientifically, leaving moral judgements out of the question, and to recognize it as a symptom of illness. In considering a particular deluded patient for whom certification was necessary, it should be remembered that under the Mental Treatment Act removal direct to a mental hospital under an urgency order signed by the authorized officer of the local authority was now possible for the rate-aided patient. Delusion was not necessarily ground for certification, though it did usually imply unsoundness of mind. A patient might be deluded and yet fit to be a voluntary patient. Confusion was easy to diagnose. The duty of the doctor here was to recognize not so much the condition as the need for skilled nursing and medical care. Patients might suffer quite seriously in hospitals or nursing homes, where general medical and surgical care was all that could be desired, for want of doctors and nurses with practical experience in caring for the very confused and restless. To warm, feed, wash, and generally to nurse a patient who might roll over and over or struggle and hit out when approached demanded the help of those whose business it was to treat patients of this kind before it was too late. Temporary treatment under the Mental Treatment Act was suitable for this type of patient, who, for the time being, must be incapable of expressing himself as willing or unwilling to receive treatment. The relative, or the authorized officer of the local authority, made application ; there was a medical recommendation in two parts: one, preferably, by the usual medical attendant, and the other by a doctor approved to make such recommendations. Some patients so dealt with would be suffering from psychosis during the puerperium. In a proportion of these the prognosis was good ; in others the confusion might mask a schizophrenia which showed itself to everyone for the first time during pregnancy or the puerperium. It would probably have been recognizable much earlier by an expert.

SCHIZOPHRENIA AND DEPRESSION

Schizophrenia, which included the form of illness known to some as dementia præcox, might present some of the following features: perhaps a family history of mental breakdown ; a physique slender and "asthenic," or dysplastic ; more than usual shyness and "oddness" in childhood, though the frequency of this was not established ; sometimes an alleged artistic brilliance which, on consideration, was found to be the power of producing drawings or writings that were striking and unusual rather than that they showed all-round excellence ; occasionally real artistic, musical, or intellectual brilliance ; negativism, a tendency to decline opportunity and sociability ; increasing lethargy and indifference ; mannerisms and grimacings, and, later, hallucinations. The early diagnosis of depression, to consider only this aspect of manic-depressive psychosis, was most important. In youth, particularly, the prognosis was good, but the patient might put himself out of a high window while the need for further steps was under consideration, and would most certainly elude the most conscientious vigilance of relatives or nurses untrained in the treatment of mental illness if he had a mind to do so. Even in expert hands some patients were very difficult to treat. Depression might be shown by retardation of thought and speech, by insomnia—particularly in the early morning—and by gloom improving during the day. There was usually, but not invariably, increasing physical ill-health, and loss of interest in the family and general affairs ; there was depression and perhaps self-reproach. Prompt treatment in expert hands was essential. A depressed patient might be suitable for voluntary treatment ; all she had to do was to write, or sign, a letter of application to the person in charge of the hospital asking for treatment. It was, of course, unwise to overpersuade an unwilling patient to sign such a form ; she would only give in her notice to leave at the first possible opportunity. It was not only unwise, but gravely unfair and dangerous, to send for treatment as a voluntary patient one obviously bent upon suicide and determined to ask for her release for such a purpose. On the other hand, the patient who truly wished for treatment was the leaven of the hospital, and the change in the proportion of voluntary to certified patients which was taking place gradually should be a satisfaction to all concerned.

THE NEUROSES

The neuroses—hysteria, neurasthenia, etc.—came more often under the direct care of the general practitioner. Some of these cases needed psychotherapeutic help ; others, of less advanced degree, might complicate physical illness or show comparatively minor symptoms. However much the orthodox would like to see all neuroses treated by the specialist, many cases had to be dealt with by general practitioners. Dr. Wilson enumerated certain principles that might help in dealing with these cases, which we quote below.

Always make a most thorough physical examination. You may know from a very simple examination that the symptom of which the patient complains can have no organic basis, but she will only begin to believe that you know it, and to have full confidence in you, after the careful examination to which she is entitled. It will save you also from missing some organic trouble in a neurotic patient.

Drop the attitude of benevolent despotism, which may be your best asset in dealing with definite physical illness, in favour of a quiet, leisurely, receptive waiting upon what your patient may have to say. Do not hurry or hustle, or scold or flatter her. This waiting and listening, and the giving of non-committal comment, is not easy to practise, and the time consumed makes treatment of neurosis in the midst of general practice a difficult thing. It is astonishing, however, what a leisurely impression may be created in a short time by the use of a quiet voice and an inactive pose.

Avoid emotional entanglements with your patients. The position of understander of the misunderstood and sympathizer with the ineffective has its dangers, and no good is done to the patient by lifting her off her own uncertain feet and hanging her permanently around the neck of the doctor.

Learn the possibilities of your own town in clinics and specialists ; go and see them if you can, and get to know their methods, or at least keep in touch with someone who does know them.

Read as much as possible of the groundwork of psychological theory. Read and study the well-known smaller works of English writers on psychological medicine, the neuroses, physique in its relation to character and the like, and read also the less technical works of Freud. Some of these are easy and most interesting reading. It does not matter if you can formulate no precise psychological doctrine from these varied readings ; what is important is to grasp the general principles behind them.

Finally, observe continually the behaviour of your patients. No amount of general knowledge of mental disorder or of psychological theory is a substitute for close and careful observation of the individual patient.

HODGKIN'S DISEASE

The meeting of the Ulster Medical Society held on January 17th, with the president, Dr. S. R. HUNTER, in the chair, took the form of a discussion on Hodgkin's disease.

Professor W. W. D. THOMSON, dealing with the clinical aspects of the disease, discussed the possible importance of sepsis as a predisposing factor. He recalled that the cervical glands, the group most commonly affected, drained an area which was the favourite site of focal infection, and in the exceptional cases where other groups were primarily involved a previous history of sepsis near by was not uncommon. Of the various symptoms due to swelling of the abdominal glands, severe and persistent pain simulating sciatica, and due to pressure on the lumbar and sacral plexus, was common in his experience. Sweating and pruritus, which might be early symptoms, seemed to be associated with exacerbations of gland activity. There was no typical blood picture. In a straightforward case, in the stage of generalized enlargement of lymph glands with a palpable spleen, the diagnosis was not difficult, but in the earlier stages it could be established only by histological examination. Probably the so-called "larval" or "latent" type, in

which there was no evidence of superficial glandular enlargement, and the spleen was not palpable, offered the most serious difficulties. Professor Thomson stressed the importance of recognizing that the deep glands might be the initial site of the disease. Deep *x*-ray, alternating with arsenical, treatment, gave more favourable immediate results in the earlier stages of localized glandular enlargement than in the later stages of generalized enlargement, but, even so, the prognosis was uniformly fatal.

Professor J. S. YOUNG, in discussing the pathological aspects, referred to the work carried out by Twort and M. H. Gordon and their co-workers under the auspices of the Rose Research on Lymphadenoma. He illustrated the morbid anatomy of the lesions with typical naked-eye specimens, and gave an account of the microscopical structure. He emphasized the increasing importance that Gordon's biological test might assume as a means of diagnosis in those examples of the disease which were not quite typical histologically. In conclusion, he discussed the nature of the disease in the light of recent work, and adopted the view that the lesion was best described as a "reticulosis."

Dr. W. B. DAVIS outlined the principles of Gordon's biological test for lymphadenoma. To the results recorded by Gordon and by van Rooyen in the application of this test in diagnosis he added sixteen further cases, in eleven of which a positive result was obtained. Eleven control cases were negative. In discussing the probable nature of Gordon's encephalitogenic agent, he said that it was capable of withstanding the method of extraction applied by Friedemann to the isolation of the similar factor in normal human bone marrow. Lymphatic glands from thirteen cases of lymphadenoma were extracted by Friedemann's technique, and in twelve a typical positive result was obtained in the rabbit. Corresponding extracts in nine cases other than lymphadenoma were consistently negative. In a series of twelve cases of lymphadenoma parallel tests were carried out by Gordon's and by Friedemann's methods. The results observed in these few cases indicate the possibility that Friedemann's method might be found to have certain advantages over Gordon's in the routine application of the test as a diagnostic measure.

Dr. F. P. MONTGOMERY dealt briefly with the difficulties of *x*-ray therapy. A general discussion followed.

At a meeting of the Society of Public Analysts on February 6th, Dr. H. E. Cox made a further communication on the chemical examination of furs in relation to dermatitis, and Messrs. R. S. Morgan and H. Pritchard presented a paper on vitamin potency and associated characteristics of cod-liver oil. The vitamin potencies of an average sample of oil, prepared by mixing together equal quantities of sixty-four samples of medicinal oil purchased retail from pharmacies in different parts of the British Isles, were determined as 670 international units of vitamin A and eighty-one international units of vitamin D per gram. These assays were based on the results obtained with forty pairs of rats in each assay.

At a meeting of the Cork Clinical Society held on January 18th, Dr. P. KIELY brought forward two cases of carcinoma of the colon. One was operated on four years ago, the other three years ago; in both of them an extensive resection of the colon was done and an end-to-side anastomosis made. The first was in a young woman, aged 24 years, and pathological examination showed a small secondary deposit in a neighbouring gland. She had since been quite well and active. The second case, a man of 54, was present, and was examined by the members; he is now in good health. Pathological specimens, gross and microscopic, of both tumours were shown. Drs. D. LUCEY and G. BARTER reported on a case of primary tuberculosis of the soft palate which had healed completely on local application of ultra-violet light.

CORRESPONDENCE

The number of letters received for publication is so large that we must ask correspondents to make their points briefly and to regard 600 words as the upper limit of length.

Maternal Mortality

SIR,—I cannot see the necessity for obstetricians of experience writing anonymously on the subject of maternal mortality. Like Sir Comyns Berkeley, I was nearly lynched at the Cardiff Meeting of the B.M.A. when I suggested that the dreadful results following failed forceps were due either to wilful negligence or abysmal ignorance, or a combination of both.

The subject of maternal mortality has been discussed from the most impossible angles, but I feel the root of the matter is in the training of students and the regulations of the General Medical Council. Students apparently get as much practical work as is possible in the maternity hospitals of Great Britain and Ireland, but I hold that they should not be allowed to practise on living women without supervision until they have done at least six months' post-graduate work in a maternity hospital where the teachers are themselves trained obstetricians. This is where the General Medical Council comes in. Instead of a man being allowed to practise on the public without supervision, I suggest that the rule stand that he may qualify in five years, so that he may take up the post of house-surgeon or house-physician where he will be under authority still, but that there should be a rule that he is not allowed to do private midwifery practice—that is, to work without supervision—until he has done six months' post-graduate work in a maternity hospital. Then the maternal morbidity and mortality rates will drop with a bump.

People speak a great deal of such things as the use and abuse of the forceps, pre-natal work, puerperal sepsis, etc. These are only links in a long chain: the other links must be perfect, and one of the methods in endeavouring to effect this perfection should be better regulations for, and better training of, the medical student.

It is an extraordinary thing that, so far as I know, there is no fixed representation of obstetricians on the General Medical Council of either Great Britain or Ireland. This very important specialty happens to be represented, I believe, by only one member in Great Britain and by none in Ireland.—I am, etc.,

Dublin, Feb. 5th. BETHEL SOLOMONS.

SIR,—I have read with some interest and no little astonishment the letter of Sir Comyns Berkeley in your issue of February 2nd. Sir Comyns confesses to the authorship of an address some years ago which rewarded him by a stream of abusive letters—dozens of them—from general practitioners, and a depleted bank balance. In the interval he has turned a somersault in his views. For now he appears in the role of practitioners' champion, convinced that those who ascribe the present mortality to their mismanagement of labour are guilty of libel. Maybe discretion has become the better part of valour, and for solace he can now exclaim, with Voltaire, "I am fond of truth but not of martyrdom."

I am loath to add one more to the conflicting opinions on this question which jostle one another for recognition in the Press, lay and medical. Even the pundits are not in agreement as to the measures, if any, that should be

adopted. Some of them emphasize the value of the ante-natal clinic ; others decry it, and content themselves with *ex cathedra* addresses on the meddlesome midwifery of the practitioners—their former pupils There is, however, one aspect of the problem which, I think, has been inadequately stressed by your correspondents. I refer to the training of the medical student of to-day and yesterday in practical obstetrics: by which I mean, the handicraft of midwifery. Is it conducted to-day on the lines of twenty-five years ago, when attendance upon a score of labours as an eye-witness and a course of lectures were deemed sufficient preparation for the man about to embark on general practice? It used to be said that the looker-on sees most of the game, and the thought may have been uppermost in the minds of those who framed such a syllabus of instruction.

I wonder how many students to-day perform under supervision the common obstetric manœuvres—for example, delivery by forceps or version—and how often. By inquiry from a number of house-surgeons I have tried to find out. I believe the number to be very small. Only those fortunate enough to pass on to a resident obstetric post after qualification—a small fraction of any "year"—appreciate early in life the width and depth of their ignorance of obstetric technique.

What is the remedy? Surely to remodel the training of the student and revise our sense of values by relegating the academic lecture to the background, and affording him increased facilities for learning a handicraft. Of course it will be argued that there is not enough material to go round ; and with some truth, so long as the present arrangements for clinical instruction continue. But this is to ignore the enormous number of maternity beds in the public assistance hospitals of the country which are not available at the moment for student training. By their transference to the public health authorities these former Poor Law infirmaries have become general hospitals, have shed their pauper stigma, and acquired a new status. Ample material is to be found there, and the obstacles to its use should not prove insuperable.

Sir Comyns fears the arrival of a State Maternity Service without due consideration by the profession. Undoubtedly there is a definite trend towards a public salaried medical service such as he suggests. Indeed, there are those who believe it is long overdue, and that the sooner it comes the better, for patient and doctor alike.

On a personal note your correspondent, fearful of reprisals, advocates anonymity for future letter-writers. Frankly, I think this a mistake. Although I no longer practise obstetrics, an honest opinion based on twenty years' clinical experience of it requires no disguise. I have therefore discarded his advice, and subscribe myself,

Yours, etc.,

F. G. RALPHS,
Fellow of the Association of Surgeons of Great Britain.

Ashton-under-Lyne, Lancs, Feb. 8th.

SIR,—The correspondence on maternal mortality in the *Journal* becomes week by week more interesting. Dr. Theobald (January 12th, p. 84), in a reply to a query of mine as to the influence of ante-natal care on the maternal death rate from toxaemias of pregnancy, says that, as he considers them to be deficiency diseases, he naturally thinks they can be prevented. Professor Strachan (January 26th, p. 175) says: "The fact has to be faced that, in the present state of our knowledge a large proportion of obstetrical complications such as ante-partum haemorrhage and toxaemia are either wholly or partly unpreventable."

It would appear that the ante-natal clinics have so far not justified the large sums of money spent upon them. One reason is undoubtedly that the women have not taken the advantage of them which they might have done. The clinics themselves, however, are blamed for much of the failure to reduce mortality. Is it really the fault of the clinics, or of the relation they bear to the practice of midwifery? How many of the cases seen in the ante-natal clinics are attended in their confinements by the officers of the clinics? Ought not the conduct of a midwifery case to remain in the hands of the same practitioner from the first ante-natal examination to the time when the woman is pronounced "fit" after her labour? Only in this way can that continuity of observation and attendance be obtained which is one of the principles of sound midwifery. To undertake part of the supervision of a pregnancy—namely, the ante-natal care—and to hand over the most important and most interesting stage—the confinement itself—to someone else must be unsatisfactory to all parties. Apart from any other consideration, it takes away from the ante-natal officer all interest and experience in practical midwifery, and hands over to another medical practitioner the responsibility for a labour the course of whose pregnancy he (or she) has had no opportunity of studying. Surely this is wrong?

Sir Comyns Berkeley (February 2nd, p. 223), in a letter for the boldness of which he is to be congratulated, says "there is no doubt that in due course there will be a State Maternity Service." Professor F. J. Browne suggested such a service some short time ago. Professor Strachan refers to the possibility in a disappointing letter, which seems to be chiefly concerned with political influences and inspired articles in the lay press. He thinks that the only certain result of such a service would be the expenditure of a large sum of public money, with no certainty or even probability that maternal mortality would be reduced in the slightest. To condemn a maternity service before it is born is surely a counsel of despair. Large sums of money are already being spent by local authorities in different directions, with results which are more or less unsatisfactory. To add to these sums sufficiently to inaugurate a maternity service, in which the present ante-natal officers would form the basis, with a maternity hospital for each district and the necessary specialist services, seems to me neither impossible nor hopeless. Many of the public bodies are already providing such services in their municipal and county hospitals. What is this but the first step towards that national service which Professor Browne advocated, and which Sir Comyns Berkeley sees is bound to come?

Professor Strachan says in his letter that the "rate has fallen from 5.5 to 4.1 per thousand births" in the last forty years. In the House of Commons, on November 26th, 1934, Mr. Shakespeare gave figures which show that the mortality in Glamorganshire is 6.45, Monmouthshire 6.78, Cardiganshire 9.60, Denbighshire 7.12, to mention a few of the Welsh counties. Surely a most unsatisfactory state of affairs. The public is fully aware of the position, and it is this awareness which is responsible for the "inspired articles" which Professor Strachan so strongly deprecates.

However much we might try to convince ourselves to the contrary, the fact remains that maternal mortality is far too high, and that before it can be reduced to any appreciable degree something drastic will have to be done to meet the position. No doubt a national maternity service sounds a very drastic step. But if the end justifies the means, the method adopted is immaterial.—I am, etc.,

RUFUS C. THOMAS, F.R.C.S.ED., M.C.O.G.

Kymin, Porthcawl, Feb. 8th.

A Midwifery Service

SIR,—Probably most general practitioners, if they were honest with themselves, would admit that they consider midwifery the most irksome of their many duties. Either it interferes with the ordinary run of work or it deprives them of much-needed hours of sleep. Except in the very early stages, attendance on a case should be a whole-time, uninterrupted job. Also, in a certain number of cases, which would come to a successful if tardy termination when left to nature, forceps are applied, owing partly to the importunities of the mother or her relations and partly to pressure of other work that is waiting.

If the present agitation is going to result in the establishment of another State service I should like to suggest that the medical profession should organize its own midwifery on the following lines. Let the country be divided up into districts. In each district the general practitioners would agree to hand over all their midwifery to someone who wishes to specialize in this work and in gynaecology, and who, in turn, would guarantee to practise solely as a gynaecological surgeon and specialist in midwifery. The fees would be those current in the district. This should afford a good living for anyone for whom, in spite of his ambitions, Harley Street has no room. The general practitioner would be relieved of much night work without losing his family practice. In addition, neighbouring districts could combine to equip up-to-date maternity and gynaecological hospitals, which could be made self-supporting through fees charged, and to which abnormal cases could be sent. These would be staffed by all the specialists in the area covered. Another advantage of this scheme would be that the general practitioner would cease to be the scapegoat in the question of maternal mortality, and the cause or causes would be more easy to trace.

Doubtless some of my elder medical brethren will now pour out the vials of their wrath upon my head for suggesting that they should hand over some small portion of their work. It is surely better to do this voluntarily, and on our own terms, than be forced to do so by the State.—I am, etc.,

S. Godstone, Feb. 4th. H. E. GIBSON.

Recovery after Stoppage of the Heart

SIR,—Mr. Percival Mills's case (*Journal*, January 26th, p. 153) brings out clearly the risks of high spinal analgesia.

The report, so vividly told, is worthy of close study, several important points being well illustrated. First, it is a typical example of how death follows high spinal anaesthesia. The sequence of events leading to this being: a big fall of blood pressure, leading to anaemia of the bulb; consequent failure of respiration and the respiratory pump, producing collapse of circulation and heart; and failure of respiration, in this case being aided by the comparatively large dose of morphine and hyoscine given before injection. The patient was 58, so presumably his arteries were thickened and his blood pressure raised, two factors which tend to be followed in these cases by a big fall of pressure. Thirdly, as nothing more than the morphine and hyoscine was given to dull consciousness (that is, no gas and oxygen), the effect of the psychic factor (fear) may have helped the fall of pressure. I have seen the blood pressure of an adult male patient fall to 60 mm. Hg from fright, just *before* he was given a spinal injection.

The next point to notice is the failure of three-quarters of a grain of ephedrine to prop up the circulation. But this was given after the injection had been made; it should have been given before. That the two subsequent injections of ephedrine failed to have any effect is quite in accordance with experience. Ephedrine will prop up the blood pressure, but has little effect in raising it once it has fallen in these cases; the manner in which it acts suggests why this should be so. The failure of the first dose of adrenaline is explained by there being practically no circulation at that time to carry it round, even if absorbed. Strychnine and coramine are of little if any use in these circumstances, and the condition of the circulation applies to them also.

What saved the situation was Mr. Mills's persistence in cardiac massage, combined with the injection of adrenaline directly into the heart and artificial respiration. The passage of an endotracheal tube, and the continuous administration of 5 per cent. mixture of CO_2 in oxygen, in a slow stream, would have been better than artificial respiration for two reasons: it is more efficient, and the movements interfere with other manipulations that may have to be done. If there is any circulation at all the oxygen and CO_2 will pass into the circulation and reach the brain. It should have been started directly the breathing failed. Considering the subsequent history of the case, Mr. Mills cannot be far out in his estimation of the time the heart was quiescent, and his persistence in cardiac massage undoubtedly kept enough circulation going until the adrenaline injected into the heart had time to act.

Finally, I would suggest that in these cases (high spinal analgesias) the patient be given a course of ephedrine for twenty-four hours previous to the operation; that the greatest care be taken in estimating the amount of percaine solution to be injected; that the Trendelenburg position must be used; that 1/12 grain heroin only be given before the operation; and that during the operation the patient be kept very lightly under with gas and oxygen, to which a little CO_2 can be added if thought necessary. Should the circulation show signs of failing, give intravenous glucose and adrenaline subcutaneously early. Should it actually fail: adrenaline to the heart, intratracheal CO_2 and oxygen, and, if no response is quickly obtained, cardiac massage.—I am, etc.,

Clifton, Bristol, Feb. 6th. STUART V. STOCK.

SIR,—The literature upon the subject of cardiac massage has reached such considerable proportions that there appears to be a danger that two contributions of outstanding importance may be forgotten. They are: the article published by Dr. T. C. Bost in the *Lancet* (October 26th, 1918), in which he described a successful case of cardiac massage by the transdiaphragmatic abdominal route after subdiaphragmatic massage had failed; and the full and arresting papers published by Dr. Albert S. Hyman in the *Archives of Internal Medicine* (October, 1930, vol. xlvi, and August, 1932, vol. l).

The experimental and clinical observations of Hyman have placed the whole subject upon an entirely different plane, and appear to have rendered obsolete not only intracardiac therapy but cardiac massage. His search of the literature shows that many drugs have been used with varying success for resuscitation of the stopped heart—for example, ether, camphor, adrenaline, digitalis, caffeine, dextrose, strychnine, metrazol, coramine. He concluded, therefore, that it was not the chemical effect which brought about restoration of the heart-beat, but the irritant action of the puncture, the prick of the needle alone being sufficient to initiate the stimulus required for contraction. Hyman points out that several authors have shown that the drug favoured by the physiologists—adrenaline—cannot be used without great danger to the myocardium. Putting his theory of mechanical irritation into practice he resuscitated a boy, who had collapsed during anaesthesia, by ventricular puncture after other methods had failed. He points out, however, that puncture of the auricle is better than of the ventricle, for the auricle is more sensitive to

stimulation, and if auricular extrasystoles and auricular fibrillation develop they are not incompatible with life. He has reported success in several cases.

The next development was the devising of an artificial pacemaker mechanism carrying a special needle electrode, through which a suitable current might be applied in order to provide an unlimited number of stimuli. This has been used with success in experimental animals and in human beings, but is clearly still on trial. Auricular puncture would seem to hold the field at present, and should be performed with as little delay as possible, for in the early stages of the development of anoxaemia of the heart muscle one puncture alone is often sufficient to excite the heart. It is clearly undesirable to make repeated punctures.

The right auricle is easily reached by a slightly curved needle, 4 inches long, inserted in the third interspace close to the right sternal margin and directed towards the middle line. In children the depth from the anterior surface of the sternum is about 2 inches, in adults about $3\frac{1}{2}$ to $4\frac{1}{2}$ inches. I have been able to prove for myself on the cadaver that there is very little difficulty in puncturing the right auricle. Whatever method of resuscitation is used, however, nothing is more apparent from an examination of the literature than that delay is fatal. Boldness is essential.—I am, etc.,

London, N.W.1, Feb. 11th. FRANCIS E. SHIPWAY.

SIR,—Professor J. A. Gunn's valuable commentary in the *Journal* of February 9th (p. 275) on the above subject prompts me to record an experience which turned me from a profound sceptic to a believer in the value of adrenaline injection in conjunction with cardiac massage.

While scrubbing up for an operation my attention was drawn to the fact that the patient, during the induction of general anaesthesia, had stopped breathing, and that the pulse was imperceptible. Having confirmed the latter fact by palpation of both the common femoral artery and the abdominal aorta, the abdomen was opened and cardiac massage carried out for several minutes without any trace of contraction of the heart muscle. Injection of 10 minims of adrenaline (1 in 1,000) was then made into the right ventricle, so far as could be ascertained. Within a few seconds the effect was dramatic: the heart recommenced to contract with such force that the impact against my hand was visible to all in the theatre, and respiration became established soon after. The abdomen was sewn up, and the patient regained consciousness within half an hour of his return to the ward. His original lesion (epithelioma of the scrotum) was treated later by radium, and disappeared for a period of two years.

Having on similar occasions seen a needle of the same type inserted into the heart and various drugs injected without any appreciable effect, one is forced to the conclusion that adrenaline can play an important part in the restoration of cardiac rhythm, and of the patient, in this type of case.—I am, etc.,

London, W.1, Feb. 9th. REGINALD C. B. LEDLIE.

The Riddle of the Psychoses

SIR,—It is frankly admitted that British psychiatry has made no effective contribution to the solution of the riddle of the psychoses in the last half-century. It is therefore suggested that an institute of psychiatry (on American or Continental lines) will end this deadlock. I submit that such institutes have achieved little of value abroad and are not likely to be more useful here; that the reason for the failure of psychiatry has been certain traditional preconceptions of its own and the employment of a method unsuited to the facts. We have never begun by studying the data of abnormal behaviour systematically and at first hand, and by basing our inductions on these observations. We have always formed a working hypothesis from some other department of medical science, and then approached our psychiatric data to verify it. Usually the data can be squared with the theory, so that even in the twenty years of my observation I have seen the following "vogues" in psychiatry: "brain disease," "heredity" (organic), endocrine defect or unbalance, auto-intoxication, basal-metabolism ratio disturbance, infective toxaemia (nasal or otherwise), etc. Not one of these causal hypotheses was arrived at from clinical study, and even the most recent line of approach—psychometry—is open to the same objection. That is to say, the "factors" to be measured are conceived (*a*) on an academic analysis of human character, and (*b*) subject to the prime consideration that they shall be ***measurable*** and not that they are related to the behaviour in question. In fact, we may say that psychiatry has failed because its investigations have hitherto been irrelevant to its subject-matter.

A close examination of disordered behaviour in its early stages reveals the very general fact that it is primarily a disturbance of social relationships. On this finding is based the hypothesis (widely held outside the mental hospital service) that the psychoses are failures or distortions of social adaptation. From the very nature of the phenomena they can never be observed in their true form in an institution or by a team of technicians, because in hospital the patient has left his domestic and much of his social maladjustment behind him (forming a new and artificial adjustment to an artificial environment), while the experts who examine him do not form such social relationships with the patient as would permit the natural undistorted expression of his personality.

So far as research into personality and social disposition goes, the mental hospital might be designed to prevent any illuminating contact between patient and doctor. The patient's home environment is investigated by social workers, his companionship is wholly provided by the nurses, and his occupation is supervised by a third type of specialist. The doctor merely cares for his body and correlates the data of the other three psychologically untrained observers. Is it any wonder that psychiatric theory tends to be *a priori* and academic?

The disordered personality presents a unitary problem which must be apprehended in its totality and in a personal relationship. No number of technical descriptions from different and impersonal points of view can be correlated so as to present the human meaning of the aberrant mind. You cannot get to know a patient effectively in much less than a hundred hours; to overcome the lifelong hostility and distrust of the paranoid character requires much more patience and kindness. I have spent about a thousand hours on one patient of the latter class in two years, and now, when I am getting interesting data, treatment must be broken off because there are no funds for maintenance. Even were this difficulty overcome, the facilities for technical publication are inadequate and those for conclusive discussion hardly exist. A psychiatric institute in connexion with a general hospital will not promote the necessary intensive and personal investigation into the problems of social living; it will merely supply the illusion that this is being done, and swallow vast sums that might be better employed.

What is really required is not brick and mortar and masses of paper reports, but interest and hard work, facilities for discussion and for correlating results with ethnological data (for example, modes of rearing, domestic and social relationships in other cultures, etc.). It is the problem of human life, of interest development and social

adaptation under varying domestic and cultural conditions, that must be studied. Until psychiatry realizes that everything else is irrelevant and that mental "disease" is only a figure of speech for such conditions as paranoia, hysteria, etc., the riddle of the psychoses will remain untouched, even unstudied, by the official mental health services.—I am, etc.,

London, W.C.1, Feb. 8th. IAN D. SUTTIE.

Chest Hospitals and Clinics

SIR,—I read in your issue of January 5th Dr. Heaf's admirable article on "The Provision of Major Surgical Treatment of Pulmonary Tuberculosis," written, one knows, after a considerable experience of the problem, and with his usual lucid exposition. A letter from a dissentient, in a more recent issue, forces me to write an expression of agreement with Dr. Heaf.

The figures quoted by Dr. Heaf are, unfortunately, unbiased evidence of the very small number of cases of pulmonary tuberculosis in England suitable for plastic thoracic surgery. Cases in other European countries have a different manifestation of the disease, and a different psychology: their solution of their problem is not ours. Surgical technique abroad is good; on the other hand, that of our thoracic surgeons is difficult to surpass. Proper conditions are essential to surgical skill: equipment; good team work, offering pre-operative and post-operative nursing; anaesthetization and operative assistance. This team cannot possibly be trained up to concert pitch at a sanatorium when a major plastic operation occurs only on a few occasions per annum—a form of stage fright is more likely to result. I have experienced both sets of circumstances as a minor member of the team. The results of the trained team (one that could on occasion face a list of four or five thoracoplasties in a morning) were the happiest, particularly for the patient. Where such facilities exist, even though the institution is primarily provided for the treatment of pulmonary tuberculosis, non-tuberculous cases needing plastic surgery inevitably present themselves.

Dr. Heaf's suggested centre is the rational method of providing the service. The pulmonary tuberculosis patient would soon accommodate to the practice of transference for special treatment. At present in sanatoria equipped with surgical treatment blocks the patient is entering a new country as compared with the sanatorium block. Apart from the metropolis, centralization is not without precedent in Great Britain: among others, the Welsh Tuberculosis Service (Welsh National Memorial Association) has a scheme that has stood the test of time. Liaison in any such scheme is simple—the surgeon is not merely an operator, he has the opportunity of personal contact and follow-up of the patient's history.

Finally, tuberculosis institutions will inevitably remain sorting places for a proportion of non-tuberculous thoracic conditions, such as bronchiectasis, abscess, malignancy, etc., often needing plastic intervention. A scheme offering continuity of investigation and treatment—investigation by any special procedure, bronchoscopic, radiological, pathological, etc.—is the method of ensuring that these patients receive the right kind of treatment with the minimum of delay. Thoracic surgery is such a valuable aid in tuberculosis when it can be applied that any means of fostering its availability should be welcomed; further, it is desirable that sanatorium workers should keep in touch with the wider field of pulmonary disease, and not be exiled to the field of tuberculosis.—I am, etc.,

W. SANTON GILMOUR.

Killingbeck Hospital and Sanatorium, Leeds, Feb. 4th.

Treatment of Cerebro-spinal Fever

SIR,—In the *Journal* of February 9th (p. 271) Dr. Joseph M. Kennedy is reported as having stated that intrathecal administration of serum in cases of cerebro-spinal fever is superior to the intramuscular or intravenous route. This, of course, will not be disputed, but what he has omitted to say was that serum given intracisternally is still better than that given by the lumbar route. This is not only what one would expect theoretically, but what has been found to be the case in practice, as shown by figures published by Goldman and Bower (*Amer. Journ. Med. Sci.*, 1931, clxxxi). Out of forty-two cases treated by the lumbar route there were twenty-two deaths (mortality rate 52.3 per cent.), while out of forty-three apparently comparable cases treated by the cisternal route only eleven died (mortality rate 25.5 per cent.). In view of the sizes of the samples this halving of the fatality rate must be definitely attributed to the superiority of cisternal over lumbar administration of the serum, rather than to the operation of mere chance. Moreover, several cases have been published in which cisternal administration was successful, although previous administration through a lumbar needle had failed to produce any improvement. It is therefore to be concluded that in all cases of cerebro-spinal meningitis the proper method of giving serum is by the cisternal rather than by the lumbar route. It is to be added that, simultaneously with this, serum should also be given intravenously, for while the intracisternal serum will sterilize the cerebro-spinal fluid, the general septicaemic condition must also be dealt with.—I am, etc.,

W. M. FELDMAN, M.D.

London, W.1, Feb. 9th.

Chronic Bronchitis and Emphysema

SIR,—The valuable paper by Dr. R. A. Young in the *Journal* of February 9th has induced me to look up a clinical lecture which I gave in 1908 (*British Medical Journal*, i, 368). It is interesting to note that at this period of time the indications for medicinal treatment given by Dr. Young are much the same as were given twenty-seven years ago. There were three drugs I mentioned. The first was iodide of potassium. The second was the balsam of Peru, "the volatile oils of which—benzyl benzoate and benzyl cinnamate—and organic acids, exert a direct, peculiar, and specific action on the mucous cells of the bronchi." The last to be mentioned was the oil of turpentine.

"But after trying the various oleo-resins, tar, ichthyol, sulphur, and many others, I have found the balsam of Peru the most efficaceous and the most generally applicable. Nor is its efficacy, as is generally supposed, chiefly confined to cases with excessive secretion. On the other hand, certain cases of more or less dry bronchitis will rapidly yield to this substance, even after iodide of potassium has failed. As regards the oil of turpentine, it is extremely efficaceous in advanced cases, especially, but not necessarily, when there is abundant secretion. . . . If the expectoration is scanty and difficult to expel, we begin with 5 to 7 grains of iodide of potassium, and having obtained a free expectoration, follow up with the balsam. The addition of ammonium chloride or carbonate, and sodium bicarbonate, assist the action of the iodide."

It will be noted that Dr. Young includes these drugs in his prescriptions, and there are other points of agreement. It is interesting to find that an authority of to-day should, to a large extent, order the same as was recommended over a quarter of a century ago.—I am, etc.,

London, W.1, Feb. 9th. A. G. AULD.

Treatment of Empyema

SIR,—In view of recent correspondence on the subject in the *Journal*, I was disappointed on reading Professor John Fraser's article on the treatment of empyema (February 2nd, p. 213) that he devoted so little space to discussion of the all-important question of when to discontinue tube drainage. A rule of thumb based on the amount of the discharge, with a provisional estimate of "ten to fourteen days," cannot be regarded as a reliable guide in making this decision.

It cannot be too often stressed that the only safe indication for removal of the tube from an empyema sinus is definite evidence, clinical and, if possible, radiological, that the infected pleural pocket has entirely obliterated; and that too early removal of the tube is the most common cause of chronic empyema. Radiological examination is most useful after the introduction of an opaque medium such as lipiodol into the sinus. A striking example of its value has recently been published in an article on empyema by Mr. J. E. H. Roberts.[1]

I noted Professor Fraser's emphasis of the importance of osteomyelitis of the ribs with some surprise. I have rarely observed this as a cause of persistence of an empyema sinus; such persistence is practically always due to the presence of an unobliterated, inadequately drained, residual empyema cavity. Cases are seen not infrequently at this hospital with the history that after an empyema operation, the sinus having healed, recurrent abscesses have repeatedly occurred in the region of the scar, have been regarded as due to a residual infection of the rib, and have been incised superficially, healing each time for a few months before pointing again. The root of the trouble in all these cases is a small chronic empyema pocket, resulting from removal of the tube from the original empyema before obliteration of the cavity had occurred.

I venture to make these remarks only because I am convinced by observation of a long series of cases of acute and chronic empyema that in the large majority of cases the prolonged disability and multiple operations necessitated by a chronic empyema could have been avoided by adequate and sufficiently prolonged drainage of the original acute empyema.—I am, etc.,

J. G. SCADDING,
Resident Medical Officer, Brompton Hospital.

London, S.W.3, Feb. 4th.

Treatment of Bronchiectasis

SIR,—In his article in the *Journal* of January 26th (p. 165) Dr. Ernest Lloyd omits one important detail. The bronchiectatic patient, owing to loss of cilia, dilatation of the bronchi, and fibrosis, has an ineffectual cough. When he coughs, the sputum mostly slips back to the cavities and inevitably becomes putrid. The bronchi when inverted are ideal drainage tubes, and when they are in this position coughing is a powerful aid to gravity. The method pursued at Stobhill Hospital during the last twelve years has been to use inversion not twice daily but hourly, except during sleep. The patient lies across a bed, high stool, or chair, the pelvis on this, hands on the floor, and head near the floor, for one minute every hour, and coughs into a receiver. In this way the cavities are fairly well emptied.

Within a fortnight a twenty-four-hour sputum will be reduced from one or two pints to five ounces or so, and the fetor will be hardly noticeable. After this time the sputum more gradually diminishes and the fetor disappears. What is more surprising is that in the course of a year or two the clubbing of the fingers may also disappear. Expectorants and inhalations have not been needed. Bronchoscopic suction is at first often helpful: bronchoscopic lavage I have long given up. Foreign bodies must be kept in mind, and nasal sinusitis, if present, must be treated. Both these factors are often missed, and nasal sinusitis will often cause bronchiectasis to be missed, and vice versa.—I am, etc.,

JAMES ADAM.

Glasgow, Feb. 7th.

[1] *Post-Graduate Medical Journal*, January, 1935, p. 53.

Digitalis in Pneumonia

SIR,—I have read with much interest Professor Wynn's letter in the *Journal* of January 26th (p. 177). The question of the usefulness of digitalis in the treatment of pneumonia appears to have given rise to much difference of opinion. It is mentioned in 1856 as having been recommended, but the writer suggests that it is preferable to adhere to safer remedies, such as "bleeding," etc. The Bellevue Hospital investigation in 1928–9, quoted by Professor Wynn, appears to afford strong evidence against digitalis, but a discussion of the validity of the conclusions arrived at opens up much too large a field for me to enter upon. I may say, however, that as years have gone by I have become increasingly distrustful of the apparent conclusiveness of such investigations.

There is a point referred to by Professor Wynn, bearing on the action of digitalis, in regard to which I should much like fuller information. He says:

> "Digitalis has undoubtedly been given under the impression that in circulatory failure the heart is principally at fault, but evidence is accumulating that serious failure is mainly peripheral, and due to loss of contractility of the minute blood vessels. Upon this digitalis can have no influence."

Why can digitalis have no influence? I admit that this is a point of first-class importance. Lauder Brunton, in his *Pharmacology, Therapeutics, and Materia Medica*, 1893 (p. 996), maintains that rise of blood pressure produced by digitalis is due in great measure to contraction of the arterioles. He disagreed with others who took the view expressed by Professor Wynn. Subject to further and better information, I am inclined to agree with Lauder Brunton. It seems clear that care and discrimination are required in treating pneumonia with digitalis. To administer digitalis indiscriminately, in doses graded according to body weight, is not a fair test of the value of it in the treatment of pneumonia.—I am, etc.,

HUGH WOODS.

Blindley Heath, Jan. 28th.

Antistreptococcal Serum for "Rheumatic" Affections

SIR,—In the *Journal* of January 26th (p. 176) Dr. Eason suggests that the mode of action of antistreptococcal serum in rheumatic fever is non-specific, and may be "mainly one of protein shock." He records a satisfactory result from normal horse serum. I think it may be doubted that this good result from the use of normal horse serum is due to protein shock, and for this reason. In immune serum the immune body can only effect its destructive action in the presence of complement. The immune body may be present in the patient's serum in considerable amounts, but is inactive on account of the insufficiency of complement which the exhibition of normal horse serum supplies. I would suggest that for this purpose normal guinea-pig serum, or even normal human serum, might be used. I have known of a case of typhoid fever which was *in extremis* being cured in a very dramatic fashion by the use of normal serum.—I am, etc.,

P. H. J. TURTON, M.D.

Heanor, Jan. 31st.

Haemorrhage during Operations, especially Thyroidectomy

SIR,—Mr. Rendle Short, in his memorandum under the above heading (February 2nd, p. 202), rightly stresses the fact that many patients have, in the past, been alleged to have died of shock when in reality they were the victims of too severe a loss of blood. This is particularly true of thyroidectomy, since in this operation, when performed for toxic goitre, the loss of an amount of blood which would not be grave (though perhaps regrettable) in other operations, may well prove serious or even fatal to the patient. He then describes his method of checking the amount of blood lost by weighing the swabs, and makes the surprising statement that "in the majority of cases the amount of blood lost is about ten ounces," and that "it may be as low as three or as high as twenty-five." Surely one of the main reasons for the present-day safety of thyroidectomy is a realization that under all circumstances the blood loss must be minimal, and the perfection of a technique that ensures it being so. It would seem to me that a loss of blood in the region of twenty-five ounces, or even ten, would so obviously, in a case of toxic goitre, represent some very unusual technical difficulty, that the surgeon should in any case terminate the operation at one of the recognized stages without needing the warning of weighed swabs to coerce him.—I am, etc.,

London, W.1, Feb. 5th E. G. SLESINGER.

Endoscopic Resection of the Prostate

SIR,—The statement by Messrs. R. W. Doyle and G. Y. Feggetter that spinal anaesthesia is unsuitable for endoscopic resection of the prostate is a regrettable one. The reason they give for this statement leads me to believe that they do not realize that there is a difference between high and low spinal anaesthesia. The latter, which produces no change in blood pressure, is all that is necessary for this operation, and I have used it in all my cases, and in my opinion it is the analgesia *par excellence* for this operation. The relaxation of the pelvic floor gives one an ease of working and gentleness of manipulation which cannot be surpassed, and the disturbance of the patient both generally and locally is reduced to a minimum. As witness of this I not infrequently use this anaesthesia upon out-patients for minor bladder and rectal work.

The suggestion that caudal block should be substituted is an even more unfortunate one. As Mr. Kenneth Walker so truly states, it is a haphazard, uncertain procedure; the bony landmarks vary, and are often obscured by fat, and the sacral canal varies in direction and curve. Most important, it is a dangerous form of anaesthesia; such a large quantity of novocain injected into a confined space may force its way into a vein pricked with the needle, or more commonly an overdose of novocain is unwittingly given into a low spinal theca, and I have personal knowledge of two deaths produced, I feel certain, by this latter method. Low spinal anaesthesia is safe, simple, and quick. Caudal block is slow, unreliable, often painful, and definitely dangerous.—I am, etc.,

London, W.1, Feb. 5th. A. DICKSON WRIGHT.

SIR,—May I join with Mr. Kenneth Walker in congratulating Messrs. Doyle and Feggetter on their excellent report on 150 cases of prostatic obstruction treated at All Saints' Hospital by endoscopic resection (*Journal*, January 26th, p. 147). On one point I would comment—the death of six patients out of seven in whom clot retention developed. Either excessive instrumentation must have been employed in attempts to evacuate the bladder, or there was unnecessary delay before operative relief was given. In my own series, now amounting to almost 250 cases, I find that I have had to open the bladder for clot retention in six instances. In four of these the retention was within twelve hours of the resection (two in the early days of 1931, when a valve type of endothermy unit was employed), one on the fourth day (twenty-four hours after removal of the catheter), and one on the eleventh day, where normal micturition had been proceeding for some days. All recovered except the last, who succumbed some weeks later from a renal infection after leaving the nursing home with a healed suprapubic wound. Though I have not had to open a bladder during the past twelve months following an endoscopic resection, cases of post-operative haemorrhage, either early or delayed, must inevitably turn up from time to time. With careful supervision the process should seldom progress to the stage where per-urethral relief is not readily secured, but if there is doubt it is best to drain from above. Procrastination is a poor haemostatic!

Mr. Walker asks for information as to the incidence of multiple sessions. My own last 100 consecutive cases comprise: (*a*) sclerotic bladder neck, etc., 17 cases; (*b*) post-prostatectomy obstructions, 7 cases; (*c*) carcinomatous prostates, 12 cases; (*d*) "Adenomatous" prostates of varying types, 64 cases. In the first two groups there were no repeat operations. In one carcinomatous case the urinary stream was inadequate at the end of fourteen days, and a further resection was carried out, with the desired effect. Among the "adenomatous" glands, fifty-five were given a single treatment; eight required two resections; and one case of massive enlargement, with deplorable renal and cardiovascular apparatus, was dealt with satisfactorily in three sessions. The "expert" who continues to resect when he has no longer full visual control of the operative field is not an "expert"—or only a self-designated one—in this branch of surgery.

I agree with Mr. Power that undercutting the lateral lobes is frequently inadequate, and the resulting "pedunculation" of the lobes may make the obstruction to urination worse than before intervention. Regarding the choice of anaesthetic, generally speaking I prefer a "low spinal" with its full analgesia; but in a number of instances, especially where extreme hypotension or hypertension is present, I select an extradural caudal block, supplemented, if necessary or desired, with gas-oxygen.—I am, etc.,

London, W.1, Feb. 4th. TERENCE MILLIN.

Retrograde Intussusception after Gastro-jejunostomy

SIR,—In the opening paragraph of his instructive paper (February 9th, p. 248) on retrograde intussusception following gastro-jejunostomy, Mr. Wilfrid Adams states that this acute abdominal catastrophe is ignored in my book, *Emergency Surgery*. It is difficult to understand how Mr. Adams came to include this passage in his carefully prepared paper; not only is the condition described fully in the book, but there is an illustration of it occupying half a page, which one hoped would have arrested the attention of anyone merely glancing through the volume.

Incidentally, it might be mentioned that retrograde intussusception following gastro-jejunostomy has occurred in pregnant women sufficiently often to warrant pregnancy being categorized as a subsidiary aetiological factor.—I am, etc.,

London, W.1, Feb. 9th. HAMILTON BAILEY.

Spinal Anaesthesia

SIR,—Since writing my article on this subject (*Journal*, February 2nd, p. 197), in which I stressed particularly the fall in blood pressure, I have received from Bayer Products Ltd. a preparation called "icoral." It is claimed that this will raise blood pressure. I have no knowledge of its effects in this respect in general medicine, but in conjunction with a spinal anaesthetic there is the prospect of its being of great value. With 2 c.cm. given intramuscularly five minutes before the anaesthetic an initial pressure of 120 mm. Hg is raised during the early stage of anaesthesia to from 150 to 170 mm. Hg, and maintained around this figure even with a high anaesthetic level. Indeed, in some cases over 200 mm. Hg. was reached, and in elderly people I thought this might not be safe. I have therefore reduced the dose to 1 c.cm., with which the pressure can be kept within 20 mm. Hg of the initial level without other aid; the lowest I have seen is 85 mm. Hg, and this for only a few minutes, which for high spinal anaesthesia is a difficult level to maintain without the use of CO_2.

The number of cases in which I have used icoral is small as yet—in the neighbourhood of twenty—but the effect is so striking and consistent that I hasten to put my experience on record in order that others may try the drug instead of ephedrine. Possibly the best dose may lie between 1 and 2 c.cm., but I feel sure the drug can be depended on to combat the fall in blood pressure which almost inevitably occurs without it.

I am obliged to Mr. Laurence O'Shaughnessy for the information contained in his letter in your issue of February 9th (p. 277). Anaesthesia which produces an imperceptible pulse does not appeal to me, however, and probably not to him either. At any rate, if he should wish to produce generalized anaesthesia with a spinal anaesthetic again, it would be interesting to give a preliminary dose of icoral. If he can maintain a good blood pressure, and at the same time obtain so generalized a state of anaesthesia, it would be instructive and, I am sure, add to his feeling of safety. But I am doubtful whether these two conditions can coexist, since I believe generalized anaesthesia with a spinal anaesthetic can only be obtained at the expense of a rather alarming level of blood pressure.—I am, etc.,

Leeds, Feb. 10th. E. R. FLINT.

Expectant Treatment of Acute Appendicitis

SIR,—Dr. L. J. Panting's letter on the expectant treatment of acute appendicitis in your issue of February 2nd prompts me to quote two cases of anorexia and symptomless loss of weight following an operation for acute appendicitis.

A girl of 17, who weighed 11 st., was operated on for acute appendicitis successfully in April, 1925. Anorexia developed during convalescence, and on return to school in October, 1925, she lost 14 lb. in five weeks. By January, 1926, her weight had fallen to 8 st. She came under my care in April, 1926, when her weight was 8 st. 6 lb.; for the previous two months she had been fed entirely by means of a stomach tube, as she professed herself quite unable to take an adequate quantity of food in the ordinary way. A complete investigation had already been carried out and had disclosed no organic cause for her symptoms. Strenuous psychotherapy resulted in the immediate return to a normal diet with rapid recovery, and two years later the patient was still in robust health.

The second patient was a girl of 16, who underwent an operation for acute appendicitis two years before I saw her—this was followed, during convalescence, by an operation for the removal of her tonsils. During the subsequent eighteen months she lost 3 st. in weight; when I saw her she had been on a starvation diet for many months. A full investigation was carried out with entirely negative results. A simple form of psychotherapy resulted in a rapid return to normal diet, and two years later the patient was still reported to be in good health.

In these two cases of post-operative anorexia nervosa the operation was performed during the acute attack, but in other respects the subsequent history appears to be identical with that of the case quoted by Dr. Panting.—I am, etc.,

New Lodge Clinic, Feb. 5th. JOHN VENABLES, M.D.

Anaesthesia for Tonsillectomy

SIR,—In a letter from Dr. Shaheen of Cairo (February 9th, p. 278) it might be thought, from the way he has worded his letter, that I had "on occasions dissected tonsils without any sort of anaesthesia," whereas I had merely used this as a quotation from his original communication on this subject. I should be glad, therefore, if you will give me the opportunity of correcting this false impression, and allowing me to state once again that I am emphatically opposed to any form of operation on the tonsils without anaesthesia. With all due respect to Dr. Shaheen and to Dr. Sydenham, I repeat that I consider their method to be barbarous in the extreme, and that I have no intention of accepting the latter's invitation to try this sixteenth century method.—I am, etc.,

Shrewsbury, Feb. 9th. GEOFFREY MOREY.

∴ This correspondence is now closed.—ED. *B.M.J.*

Meat in the Child's Dietary

SIR,—Mr. Frank Wyatt, in his protest (February 2nd, p. 230) against the statement published in the B.B.C. pamphlet on food, quotes conclusive phrases from contemporary dietetic authorities. To this I should like to add that I have personally watched the growth of close on a hundred children over an average period of ten years on lacto-vegetarian diet, and have never found cause to prescribe the addition of flesh except as a placebo. Further, I have found that a non-flesh diet is invaluable in allergic conditions of childhood and also digestive disorders, more especially lower bowel conditions, to say nothing of catarrh and rheumatism.

Most children consume flesh for the same reason that adolescents smoke—because the adults do—and it is far more frequent to find the small child showing repugnance rather than attraction for flesh food. Surely this repugnance cannot be without some physiological promptings! Is it also necessary that sentiment and science be completely divorced in our standards of nutritional behaviour?—I am, etc.,

London, N.W.1, Feb. 5th. BERTRAND P. ALLINSON.

A Rare Sequel to the Schick Test

SIR,—The following case is of interest as it is probably the only one on record, and also because it may throw some light on the pathogenesis of post-diphtheritic paresis in the human subject.

The Schick test was performed in the usual manner on an adult male, aged 27 years. The test injection was performed on the flexor surface of the left forearm and the control on the right, typical wheals being produced; there was thus no question of the injections being made subcutaneously. A true positive reaction developed between forty-eight and seventy-two hours, reached moderate intensity, and faded five weeks from the date of injection.

Four weeks after the disappearance of the reaction attention was attracted to a numbness at the site of the test inoculation. This had come on insidiously and was restricted to the area of the reaction, but a few days later had spread

from the original site downwards towards the wrist for a distance of 4½ inches, being about 1½ inches wide. The area was completely anaesthetic to both touch and pain, and was partially anaesthetic to heat and cold, this latter lasting only a few days. There was no muscular paresis of the arm or forearm. At the end of another week the area had increased to 6½ inches long by 2 inches wide, and extended to the wrist. The anaesthesia gradually disappeared, and after six weeks from its appearance normal sensation had returned.

Since the time interval between injection and anaesthesia corresponds generally to the interval between "natural" diphtheria and the late palsies, it is unlikely that the effect was merely traumatic, as might have happened if the needle had hit off a cutaneous twig of the nerve supply to the forearm. It seems reasonable, therefore, to attribute the condition to a specific localized toxic effect of the Schick reagent employed.—I am, etc.,

London, S.W.6, Feb. 7th. R. MILES ORPWOOD.

Diphtheria Immunization

SIR,—Immunizing treatment by so-called "one-shot" injection is certainly attractive. It is a method that I have used in several instances with entirely satisfactory results, employing the alum-precipitated toxoid. However, in one instance, in an adult over 40, who had six months previously had tonsillitis with peritonsillar abscess, there was a reaction of sufficient severity to contraindicate its use. An extremely painful aseptic abscess, the size of a bantam's egg, developed seven days after injection. This subsided after puncture opening and several days' antiphlogistine dressings. This should not, in my opinion, discourage use of the preparation for young children, preferably between 1 and 2 years of age, but should emphasize the warning, issued by the makers (Parke Davis), that unpleasant reactions may be encountered when it (the alum-precipitated toxoid) is administered to older subjects. Repeated injections are not objected to by adults as much as by children or parents on their behalf. It is a very great help to have the "one-shot" method available for these, who may otherwise, by refusing or neglecting repeat injections, make the immunizing futile.—I am, etc.,

Bourne, Lincs, Feb. 10th. W. B. R. MONTEITH.

Whole-time Specialist Posts

SIR,—An extensive advertisement appeared on February 2nd in your columns that contained some astounding features. Applications were invited from "medical men or women of high qualifications and professional attainments" for the posts of physicians, surgeons, and obstetric surgeons at various hospitals under the jurisdiction of one of the county councils. The main points in the advertisement were as follows:

1. These were whole-time appointments.
2. The holders must be prepared to act as consultants to general medical practitioners outside the hospital if called upon to do so.
3. Any fees received by the officers appointed must be paid over to the county council.
4. Appointments would be held during the pleasure of the council, and be subject to three months' notice on either side.

The wording of the advertisement does not suggest that the services of these specialists outside the hospital to which they are attached are intended only for poor persons who have to seek medical aid through the relieving officer, and who would thereby, in the first place, come under the care of the district medical officer. If this were so the conditions of these appointments call for no criticism.

As the advertisement appears to me the county council concerned is endeavouring to make it possible to have a financial interest in consulting practice outside the precincts of its own hospitals, as any fees thus earned by their officers must be repaid to the council. It is quite possible that consultation fees earned in this way may be sufficient to pay the salaries of these officers or even to show a handsome profit, in which case their work in the hospitals themselves would cost the council nothing, or less than nothing. Officers themselves would probably be loath to encourage outside consultations, which would only mean increased work without increased remuneration; but they would have no say in the matter, and their suitability for continued employment might well depend on the demand for their services at private consultations and their financial value to the council. The fees charged for private consultations in the districts would doubtless be decided by the council. If these were low, or *nil*, it is easy to see that general practitioners and their patients would be able to avail themselves of the council's consultants whatever the financial status of the patients might be, and would not be slow to do so. Even if the fees laid down were standard consulting fees, it would still be a case of unfair competition by the council against consultants on the honorary staffs of voluntary hospitals in the districts concerned, who have to depend on private consultations for their livelihood. County councils are not usually slow to advertise to their electors benefits, medical or otherwise, that they provide.

If my interpretation of the terms of appointment is correct, this is the beginning of bureaucratic control of consulting medicine, surgery, and obstetrics with a vengeance, and on the most pernicious lines. It should be opposed by all the forces (if any) at the command of the medical profession. Now the advertisement has been accepted by the medical journals it is too much to hope that there will be no applications, having regard to the overcrowding that exists in all ranks of the profession at the present time, especially in and around London, which is the happy hunting ground for all those who do not think much of their prospects at home, in whatever part of the world that may be. Nevertheless, it behoves intending applicants to consider carefully before placing their careers as specialists in the hands of a corporate body subject to political fluctuations from which they may at any time receive three months' notice to terminate the contract. If this happened, they would find some difficulty in maintaining their professional level in the open market.—I am, etc.,

London, Feb. 5th. B. BUCKLEY SHARP.

*** We have made inquiries, and understand that the position is as follows: Certain local authorities in Middlesex operating schemes for maternity and child welfare have entered into agreements with the county council under which women, for whom the local authorities desire accommodation in hospital for their confinement, are received into the county council hospitals. In view of the serious and undiminishing rate of maternal mortality in the country, local authorities administering maternity and child welfare schemes have been urged by the Minister of Health to make arrangements for the services of a skilled obstetrician to be available for the assistance of general practitioners in their area in cases of difficulty arising during confinement. At the request of certain authorities in Middlesex who have agreements for the admission of their maternity cases to the county hospitals, the county council has arranged, subject to certain conditions, that the staff of the maternity departments of the hospitals, to which the patients would be admitted for hospital treatment where considered necessary, should be available for the advice and guidance of general practitioners in the area, in cases of difficult labour, etc.,

the district council paying to the county council for the services of these officers. This is the extent to which the county council has approved the employment of its hospital staffs as outside consultants at the present time. In view, however, of the impossibility of forecasting the future development of medical practice, it was considered desirable, in the interests of the county council, that the terms of the advertisement for the new and senior appointments which are about to be made should be framed in as comprehensive a manner as possible, although in fact the county council has neither adopted nor even contemplated the inauguration of a general consultant service in the county, outside the county hospitals.

The Caning of Girls

SIR,—In the House of Commons on February 5th the Parliamentary Secretary to the Board of Education was asked whether he was now prepared to accept the suggestion that an official opinion should be pronounced on the medical aspect of the caning of girls, for the guidance of all local education authorities. Mr. Ramsbotham replied that corporal punishment had always been regarded as within the discretion of the school authorities, and that his Noble Friend did not see any reason to vary that policy.

It is impossible to believe that the medical department of the Board has not formed any opinion on a medical question so obviously affecting the health of the school child, and it seems to me to be very curious that when so many memoranda and annual reports are written there should be none on corporal punishment. Are we to conclude from the reply of the Parliamentary Secretary that when a county medical officer refers the medical questions to the medical department of the Board he is told that he must decide the questions for himself? Or are we to conclude that advice is given but must not be disclosed?

The views of the Board of Education are set out in the paragraph on discipline in the *Handbook of Suggestions for Teachers*, and the relevant sentences were quoted on page 1178 of the *British Medical Journal* of December 22nd, 1934. There can be no doubt that the Board intends to convey in these sentences its view that girls should not be caned by men. But some education committees give authority to men to cane girls. Such disregard of the views of the Board can only be justified if it is shown, either that the girls in, for example, the West Riding of Yorkshire, are much more obstreperous than the girls in, for example, London ; or that the teachers in the West Riding are so weak that they cannot control normal girls. Either supposition is fantastic. There can be no doubt that the views of the Board are disregarded by some education committees, and that if the caning of girls is to be stopped it will be necessary for the Board to make a rule to that effect. That is to say, Sir, the policy of the Board will have to be altered.—I am, etc.,

Wetherby, Feb. 10th. R. L. KITCHING.

Recovery after Hanging

SIR,—In Dr. Aitchison Robertson's contribution to the series "Nova et Vetera," on the subject of "Recovery after Judicial Hanging," published in the *British Medical Journal* of January 19th, it is stated that it was in 1874 that the new mode of execution by the "long drop" was introduced by Marwood, the hangman. It would appear that the introduction of the "long drop" was most probably made a considerable number of years before Marwood's day.

In *The Trial of Deacon Brodie* (who was executed in 1788), edited by Mr. William Roughead, in the series of "Notable Scottish Trials," published in 1906, a reference will be found on page 65 to a "movable platform" for the execution of criminals. This platform was one which dropped. In Appendix 15 of Mr. Roughead's book, giving an account of the execution of Brodie and a fellow prisoner, taken from contemporary sources, it is again stated that "soon after the adjustment of the halter the prisoner let fall a handkerchief as a signal, and a few minutes before three o'clock the platform dropped and they were launched into eternity almost without a struggle." Much anxiety was shown that Brodie's body might not be detained in prison, and after the magistrates retired a vein was opened. It is said that other means of recovery were used after the body was taken away, but "the neck was found to be dislocated." It was found that when Brodie stepped on to the scaffold the rope was too short and he had to step down until the rope was lengthened. Mr. Roughead refers to the belief that the movable platform, presumably a trap-door, had been the invention of Brodie himself, when a criminal was to be executed two years before he suffered the extreme penalty himself. But Mr. Roughead is not disposed to accept this as strictly accurate. Deacon Brodie (Deacon in this instance does not refer to an ecclesiastical office, but refers to the office of president, or chief officer, for the time being of the Incorporation of Wrights ; the term "deacon" is still used in Scotland to designate the president for the time being of the various trades or incorporations) as a wright was frequently employed by the Town Council in Edinburgh, and it is quite possible that he did make some kind of suggestion for a drop-platform to be used in executions, as it was current knowledge that some of the criminals who suffered judicial hanging did occasionally escape with their lives, and there is a reference to a certain Maggie Dickson, who did so escape and was known for the rest of her life as "half-hangit Maggie Dickson."

Robert Louis Stevenson was well acquainted with the life, exploits, and fate of Deacon Brodie, and made him the subject of one of his essays, and founded the inimitable *Dr. Jekyll and Mr. Hyde* on the model of Deacon Brodie. It may also be noted that Lord Braxfield, known as "The Hanging Judge," who tried Brodie, is portrayed by Stevenson in *Weir of Hermiston*.—I am, etc.,

Glasgow, Feb. 6th. JOHN PATRICK.

Registration of Osteopaths

SIR,—Dr. D. N. Hardcastle (*Journal*, February 2nd, p. 228) appears to sum up admirably any advantages that mankind may appear to derive from osteopathy. In 1857 Oliver Wendell Holmes (*Currents and Counter-currents in Medical Science*), writing in another connexion, used some words which, with very little alteration, would seem to apply to the position of osteopathy at present.

"And just so long as unskilful and untaught people cannot tell coincidences from cause and effect in medical practice—which to do, the wise and experienced know how difficult!—so long it will have plenty of 'facts' to fall back upon. Who can blame a man for being satisfied with the argument, 'I was ill, and am well—great is osteopathy!' Only this argument serves all impostors and impositions. It is not of much value, but it is irresistible, and therefore quackery is immortal.

"Yet we must own that it may have been indirectly useful . . . in teaching medical practitioners to place more reliance upon nature. Most scientific men see through its deceptions at a glance. It may be practised by shrewd men and by honest ones, rarely, it must be feared, by those who are both shrewd and honest. As a psychological experiment on the weakness of cultivated minds, it is the best trick of the century."

—I am, etc.,

LAMBERT ROGERS.

British Post-Graduate Medical School, Feb. 4th.

Obituary

ARTHUR THOMSON, LL.D., M.B., F.R.C.S.

Emeritus Professor of Anatomy, University of Oxford

Professor Arthur Thomson, who died at his home in Woodstock Road, Oxford, on February 7th, in his seventy-seventh year, will be remembered for many things. He will be remembered especially for the share he has taken in making the medical school of the University of Oxford one of the first in England. It is now almost half a century since Sir Henry Acland brought him from Edinburgh to teach human anatomy to a handful of Oxford medical students. He was then 27 years of age, and was one of the many men whom Sir William Turner trained in anatomy and sent out to establish the Edinburgh traditions in other schools.

When Thomson arrived in Oxford he found the department of human anatomy housed in a tin shed ; when he resigned in 1933—being succeeded by Professor W. E. Le Gros Clark—he left a department housed, equipped, and staffed in the most modern manner. He grew old in the service of his adopted University. He gave to his students much more than a knowledge of the structure of the human body ; he gave each and all of them part of his own rich personality. In heart and mind he remained a student to the end ; to his students he was the most beloved part of the University.

Arthur Thomson will be remembered for the contributions he made to our knowledge of the human body. He opened up no new field of inquiry, but he made new observations on all parts of the body. Students of the 'nineties will remember his ingenious models made to illustrate the growth of the human skull. As the model was inflated its shape was seen to be influenced by the pull on it of the muscles of mastication. His observations on the " squatting " facets at the ankle and knee are known all the world over. His very best work was expended on the human eye ; his preparations to demonstrate new points in structure were of great beauty ; so were the photographs taken of these preparations. His observations formed the basis of his well-known book *The Anatomy of the Human Eye*. It was his interest in the structure of the eye that made his department in Oxford the meeting-place for the Ophthalmological Congress. Latterly he began a long search for early stages in the cleavage of the human ovum. His failure to convince other anatomists of the justice of his interpretation clouded the pleasure he had formerly found in original inquiry.

Professor Thomson was one of the founders of the school of anthropology in Oxford. Professor Rolleston had built up in the University a collection of British skulls representing the races of earlier times. This became the nucleus of the anthropological collection or museum which grew up in Professor Thomson's department. Along with Mr. Randall MacIver, Professor Thomson made one of the first and most extensive investigations ever made into the craniology of the ancient Egyptians. Their results were published in *The Ancient Races of the Thebaid*.

It is not too much to say that Arthur Thomson would have cut a greater figure in life if his natural gifts had been fewer in number. He had too many of them. He was at heart an artist ; he married the daughter of an artist ; he was devoted to his brush. It was this love that made him teach anatomy at the Royal College of Art, South Kensington, and afterwards at the school of the Royal Academy. His *Handbook of Anatomy for Art Students* appeared first in 1896, and held its own against all competitors. His home became a treasure-house of art. Thomson had great public spirit, and sat on the General Medical Council from 1904 until 1929 as representative of Oxford University. He had business ability, and loved company and companionship. He was true to his friends, and all his students being counted in the number, he was particularly true to them : he never tired telling them " To play the game," by which he meant the game of life, which was to be played according to the rules understood by educated and honest people. The game had to be played honestly, openly, and justly. It also included being true to one's friends. He thought everyone should be a member of a party—of the Conservative Party for preference—and having chosen a party it was a student's duty to support it—whether winning or losing. Above all, Professor Arthur Thomson was fortunate and happy in his home life. The sympathy of hundreds of his friends will go out to his widow—who recently became completely blind—and to his two daughters. Honours came his way in numbers, but the reward he valued most was the love given to him by his pupils and his friends.

When the British Medical Association met at Newcastle in 1893 he was secretary of the Section of Anatomy, and he presided over the same Section at the Annual Meeting at Oxford in 1904.

HARRY TYRRELL-GRAY, M.CH., F.R.C.S.

Surgeon to the Hospital for Sick Children and the West London Hospital

We regret to announce the death on February 6th, at his residence in Harley House, of Mr. H. Tyrrell-Gray, senior surgeon to the Hospital for Sick Children, Great Ormond Street, and senior surgeon to the West London Hospital. He was also surgeon to the Freemasons' Hospital.

Harry Tyrrell-Gray, son of Richard Gray, was born at Sao Paulo, Brazil, on September 16th, 1880. He was at school at Colet Court and St. Paul's, and at the age of 19 went up to Trinity College, Cambridge, with a scholarship. He graduated in 1902. From Cambridge he went to St. Thomas's Hospital, where he qualified M.R.C.S., L.R.C.P. in 1905, subsequently taking the F.R.C.S.Eng. in 1907 and the M.Ch.Cantab. in 1908. At the end of 1906 he was elected resident medical superintendent at Great Ormond Street, a position he held for three years, becoming surgeon to out-patients in 1911 and full surgeon in 1926. In 1912 he was elected assistant surgeon to the West London Hospital. For some years also he was on the staffs of the Hampstead General Hospital, the Italian Hospital, and the Infants Hospital, but had to resign these appointments owing to the pressure of work at his other hospitals, combined with a very large surgical practice. Success came to him at an early age, for he had the ability to impress others with his enthusiasm and confidence, and to gain the trust and willing co-operation of doctors and patients alike.

He was a man of brilliant imagination and quick decisions, always ready to adopt new ideas and methods. He was a bold and clever operator, and in abdominal work, where his chief interests lay, he had very few equals. His operating was the admiration and inspiration of his colleagues, who seldom lost an opportunity of assisting him or watching him at work. Among the younger men there was always the keenest competition to become his house-surgeon, for here it was recognized was an opportunity to learn a beautiful technique and see abdominal surgery at its best. His contributions to the journals were numerous, and covered a variety of subjects, chiefly abdominal. In 1912 he gave the Arris and Gale Lectures at the Royal College of Surgeons on " The Mechanism and Treatment of Shock," and in 1920 a Hunterian Lecture on " The Influence of Nerve Impulses on Visceral

Disorders." He was honorary secretary of the Section of Diseases of Children of the British Medical Association Meeting at Aberdeen in 1914, and vice-president of the same Section at Nottingham in 1926, and two years ago president of the West London Medico-Chirurgical Society.

Tyrrell-Gray was a generous, warm-hearted man of many friends, always full of sympathy and ready to help anyone in trouble, and his amusing conversation and ready wit made him a very welcome and popular member of any medical gathering. He was a very fine pianist and in his earlier days was in great request at smoking concerts and dinners; indeed, at one time, when at Cambridge, he seriously considered taking up music professionally, and one cannot help thinking that with his fine artistic sensitiveness and executive skill he might have gone far. He was a keen Mason, and was a member of the Cavendish and several other lodges. In 1919 he founded the Old Pauline Lodge, and at the time of his death was a Past Grand Deacon. Never a very strong man, he yet managed to get through a tremendous amount of work; no day or night was too long for him. He never spared himself in any way, and many times one has seen him at work on difficult cases when he should have been in bed. There is no doubt that overwork was largely responsible for his very serious illness in 1931, which incapacitated him for many months and from which he never completely recovered. His friends have seen with alarm his gradual failure during the last few years, and that his reserves of strength were becoming exhausted.

He married in 1912 Betty Whitelaw, the adopted daughter of Mrs. Packer Jervis of Egerton Gardens, by whom he had a son and three daughters. His home life was beautifully happy, and the deepest sympathy is felt for his widow and family. His loss will be sincerely felt by his friends.

Dr. ERIC PRITCHARD writes:

Although there must be a large number of his personal friends and surgical colleagues who are better entitled than I am to pay a last tribute to the memory of Tyrrell-Gray, I feel that as the senior member of the staff of the hospital to which he probably conferred more signal service than he did to any other, I must not allow the occasion to pass without "the meed of some melodious tear." The Infants Hospital undoubtedly owes its present existence to the resourcefulness and courage which he displayed at a time (1922) when its affairs were in a very critical condition. By inducing the Committee of Management to take the very drastic step of asking the whole of the medical staff to tender their resignations and submit to re-election under a completely new and somewhat unconstitutional scheme, there is no doubt that he saved the situation. Tyrrell-Gray was himself the first of the old members of the staff to be re-elected, and in the active capacity of surgeon served the hospital well and faithfully until a few years ago, when he was appointed a member of the consulting staff. In the highly specialized class of work which he did at the Infants Hospital, I believe that he had no superior and few equals. No surgeon ever did a pyloric operation with greater dexterity and rapidity than Tyrrell-Gray, and no plastic operator ever got more consistently good results in cases of hare-lip and cleft palate. During the eventful years in which I was associated with him at the Infants Hospital I always found him a very loyal and considerate colleague, but he never ceased to grumble at the very unsatisfactory conditions under which at that time he had to carry out his surgical work, and he was always agitating for improvement and reform. I only wish he could have remained with us a few years longer in order that he could have seen the realization of his hopes and ambitions, and have carried out his work under the almost ideal circumstances provided by our recent improvements and extensions at the hospital. In addition to being a first-rate surgeon and a delightful companion Tyrrell-Gray was a man of affairs, and one whose opinion weighed in the councils of men. He was an excellent committee man, and his advice was always held in respect by the management of the hospital.

JOHN DIVINE, M.D.

Coroner for the City and County of Kingston-upon-Hull

We regret to announce the death on February 1st of Dr. John Divine, the Hull city coroner, at the age of 63. He was a past president of the East Yorkshire and North Lincolnshire Branch of the British Medical Association, and had served upon the Representative Body and the Insurance Acts Committee. Under the chairmanship of Dr. C. H. Milburn he was the first honorary secretary both of the Local Medical and Panel Committee and of the Hull Medical War Committee.

John Divine was born at Kirkintilloch, Dumbartonshire, in 1872, and received his medical education at Anderson's College and the University of Glasgow, graduating M.B. and C.M. in 1895, and proceeding to the M.D. degree in 1904. After his appointment as a justice of the peace in 1917 he began to read law, and in 1921 was called to the Bar as a member of Lincoln's Inn. He was for many years medical assessor and referee to the Hull County Court, senior medical officer to the Post Office, and visiting surgeon to the Hull and Sculcoates Dispensary. He was an honorary life member of the St. John Ambulance Association and an honorary associate of the Order of the Hospital of St. John of Jerusalem in England. During the war he was senior physician to Reckitt's Military Hospital and medical officer in charge of troops at Sutton and Hull. In 1918–19 he was medical referee to the local War Pensions Committee. He served on several occasions as member of courts of inquiry set up under the National Insurance Acts, and in 1922 investigated for the Ministry of Health the incidence of rheumatic diseases among insured persons.

Dr. Divine was appointed city coroner at the close of 1925. In 1930 he came much before the public eye in connexion with a case heard in the High Court, when his inquisitions committing a man for trial on charges of manslaughter in a motor accident were quashed by Mr. Justice Talbot on the ground of irregularities at the inquest.

A colleague, "J. C.," writes:

It is now many years since I met John Divine. We were fellow students in the class of clinical surgery conducted by the late Sir George H. B. Macleod, and it was at this time that I formed a high opinion of Divine, which was to become intensified as our student days wore on and which ripened into an admiration when we became colleagues in the city in which he died. I can still visualize him arriving in the mornings at the Western Infirmary on a cushion-tyred cycle, having ridden in from Kirkintilloch, and can still think of him setting out in the late afternoon for his home, regardless of what the weather was or was likely to be. He was born in none too affluent circumstances; he was nurtured in typical Scottish fashion, and even in the early days in which I first met him he displayed a character which was destined to bring him to the top of his profession wherever he was likely to be called to. As a student he was thoughtful, a hard worker, possessed of grit and determination, and was always among the upper members of his class when the results were known at the end of the session. I lost sight of him after we graduated until, like me, it was

destined that he should settle in Hull, and it was a joy to me that our paths of life had both been directed to the same city.

His career was a most successful one, but he will be best remembered amongst the members of the medical profession for his work as medical referee under the Workmen's Compensation Act and his choice by the city to the high office of H.M. Coroner. In his work as medical referee in the County Court he listened with attentive ear to the various theories and the various opinions voiced by different members of the medical profession, and always approached his examinations with that high sense of dignity, that determined sense of justice, which was so much part of his nature. He had equipped himself for this branch by acquiring one of the finest medical libraries in the city, and he kept himself well abreast of the times in everything pertaining to his work. In his office as coroner he exhibited a character which one might term "Scottish" above everything. He might appear brusque in his manner, serious sometimes to a degree, but at all times there rose above this rugged appearance of character one of the kindliest hearts which any man could ever possess. Efficiency was his watchword; he was meticulous to a degree, and yet those who appeared before him were always treated in a manner which bespoke the gentleman born. For those who were in distress he had always a kindly word; to the young graduate appearing before him for the first time he was like a father, and to those who knew him well one might say he was the straightest member of his profession. We, as a profession, will all miss John Divine, for we thought that in him at all events we had a friend who could be trusted.

SIR THOMAS PARKINSON, M.D.

The death of Sir Thomas Wright Parkinson, on February 7th, after an operation, has removed a most distinguished general practitioner, who by reason of his outstanding skill and kindly nature had made innumerable friendships among his patients and medical colleagues.

Born in New Zealand seventy-one years ago, he spent his early life on sheep and cattle stations. He came to Edinburgh in 1886 for his medical education, graduating M.B., C.M. in 1890; in 1898 he obtained the diploma D.P.H.Aberdeen, and in the following year proceeded M.D. His student course brought him honours in zoology, anatomy, medicine, and surgery, evidencing even then his wide outlook and exceptional abilities. Practice in Forfarshire and Sunderland followed, among his appointments being those of clinical assistant in the Royal Infirmary, Edinburgh, medical officer of health to the borough of Brechin, and visiting surgeon and physician to Brechin Infirmary. He removed to London in 1900, built up a large general practice in the West End, and was physician to the Prince and Princess of Prussia, Princess Louise of Battenberg, Prince Louis of Battenberg, and other well-known members of society. The war brought him extended activities, and among his services were those of physician on the staff of the Countess Lytton Hospital for the Wounded and consulting physician to the American Hospital for British Wounded at Hampstead. He received the honour of knighthood in January, 1916.

Sir Thomas Parkinson had travelled widely in America and the Far East. He had been a member of various medical societies, including the British Medical Association, which he joined in 1903, the Chelsea Clinical Society, of which he was a former president, and the Royal Society of Medicine, where he took special interest in the study of diseases of children. He contributed papers on gynaecological and surgical subjects to the medical literature. His boundless energy, zeal for acquiring new knowledge, and skill in diagnosis and treatment rapidly brought him to the front rank in general practice, and his understanding sympathy with the difficulties of his patients ensured him a lasting affection. His loyal devotion to his colleagues was proverbial, even while he chafed at times against some of the restrictions which seemed to him to hamper the practice of medicine. Always receptive of new ideas, his work never became stereotyped; he kept abreast of discoveries, and utilized those he found good with an eagerness that kept him young at heart. In recent years, when his advancing age brought physical limitations, he retired to Slough, but came up to London from time to time to meet some of his old patients until his long final illness rendered this impossible.

JAMES MUSGROVE, LL.D., M.D.

Emeritus Professor of Anatomy in the University of St. Andrews

The death took place at his residence in St. Andrews on February 6th of Emeritus Professor James Musgrove, who had been the first occupant of the Bute chair of anatomy in the University of St. Andrews. He had been in poor health for some time. Professor Musgrove was born at Kendal in 1862, and received his early education in that town. He took a medical course at Edinburgh University and graduated M.B., C.M. there in 1886, proceeding two years later to the degree of M.D. After holding a post as house-surgeon to Professor Chiene in the Royal Infirmary of Edinburgh, he was for a number of years demonstrator in the anatomy department of Edinburgh University under Sir William Turner.

In 1896 he was appointed to the newly instituted lectureship on anatomy in the United College of St. Andrews University. His training had fitted him well to fill the duties of this office, which was no light task. He equipped and furnished a laboratory, and provided the essentials for teaching a science, instruction in which is so dependent upon practical work. The early years of his work in St. Andrews had been so fruitful that when the third Marquess of Bute erected a permanent building for his department and endowed a chair of anatomy, the University Court had no hesitation in appointing Musgrove to be the first professor. During his tenure of this office his technical skill and artistic taste found ample scope in the preparation of an anatomical museum, which, under his direction, subsequently contained an excellent representative collection of specimens. He carried on the teaching work of this office with vigour and success. Many generations of students will remember with gratitude his lucid instruction, his fluent discourse, his concise and simple methods of presentation. Professor Musgrove relinquished the chair in 1914 for reasons of health, and was succeeded by Professor David Waterston, who has largely extended the work so well begun. He remained a staunch friend of St. Andrews University. Before the quincentenary celebration of its foundation he and Mrs. Musgrove presented to the University a magnificently furnished museum in memory of Professor Bell Pettigrew, and after his retirement he gave to the department which he had created many specimens from his own private collection.

He held many academic distinctions, including the Fellowship of the Royal College of Surgeons of England, the Royal College of Surgeons of Edinburgh, and the Royal Society of Edinburgh. He was also a Fellow of the Anthropological Institute. In recognition of his valuable services to the University the degree of LL.D. was conferred upon him in 1916.

Professor Musgrove was respected by his fellow men. Those who knew him intimately admired the strength and quality of his character, the quiet charm of his personality, and his inborn grace and courtesy, which he showed to all who came in contact with him.

THE LATE DR. HENRY WALDO

Dr. L. A. WEATHERLY sends the following appreciation of his old friend and fellow student:

I was much interested in the obituary notice of the late Dr. Henry Waldo, a very dear friend, and I should like to add a few words not only of appreciation but maybe of interest to those who remember the old days when elections to the staff of any hospital were entirely in the hands of the subscribers.

Henry Waldo was my senior by six years, having been born in 1846, while my birth took place in 1852; but he entered the Bristol Medical School and the Bristol Royal Infirmary only two years before I did, in 1867, whereas I began my student career in 1869. We were great student friends, and I had the highest regard for him. He preceded me to Aberdeen University and took his degree in 1871, while I took mine in 1873. It was in 1873, while I was house-physician at the Bristol Royal Infirmary, that a vacancy in the staff took place, that of assistant physician. Henry Waldo decided to put in for this, and as he had always been most popular we thought his election certain, when suddenly a well-known Army professor of medicine at Netley was brought into the competition by a very influential society section of Clifton, who wanted him to settle in practice as a consultant. We friends of Henry Waldo formed ourselves into a committee, and canvassing was very keenly carried out by both candidates. The night before the election, which was to be declared at the Bristol Guildhall, which a few days ago just escaped from being burnt to the ground, Henry Waldo's committee, on which I had a seat, assembled and recognized from returns that the election was to be a very close one and every vote counted. One of our members discovered the name of an old lady living at Weston-super-Mare who apparently had a fair number of votes. It was at once decided to send one of our members by first train next morning to hunt the old lady up. By midday he returned and triumphantly showed us, to our delight, proxy voting papers to the number of thirty-six. That evening, when the result was declared, dear Henry Waldo had been elected by, I think, only a few votes. He soon became a senior physician and was much beloved by all his patients, and showed himself to be an able and painstaking clinician, and he quickly had a big practice in Clifton.

He was quite the type of a family doctor, loved and respected by all his patients and their confidential friends, a type which I fear in these days is becoming rarer. I was elected to the presidential chair of the Bath and Bristol Branch of the B.M.A. in 1898, and he followed in my footsteps in 1902. We often corresponded, and it was only a few months ago I had a charming letter from him.

A large circle of friends and patients will mourn the passing of Dr. C. A. GOULLET, which took place at the Hospital for Officers, Brighton, on February 4th, after many months of illness. Charles Arthur Goullet, the son of Dr. Charles Peter Goullet, was educated at Loudoun House School and University College, from the Medical School of which he qualified M.R.C.S., L.R.C.P. in 1886. After holding resident posts at Wolverhampton Hospital and the Lying-in Hospital in Lambeth Road, Goullet started practice with his father in his home district of St. John's Wood in 1889, from which date he has been one of its best-known practitioners, being specially interested in maternity work, at which he was particularly skilful. As a member of the honorary staff of the St. John's Wood and Portland Town Dispensary, he was closely connected with its administration, being both a trustee and an honorary treasurer for many years, and for some forty-three years he was honorary medical officer to the Cecilia Blind Home for Women, in both of which positions he was greatly beloved. A keen volunteer from the age of 16, Goullet served in the old 5th West Middlesex Regiment (Duke of Cambridge's Own), which later became the 9th Middlesex in the T.A. He subsequently commanded No. 333 Field Ambulance. During the Great War he was senior medical officer on the East Coast, retiring in 1919 as lieutenant-colonel and with the Territorial decoration. A special form of incinerator invented by him was adopted by the War Office, and is now in general use throughout the Army. A quiet and unassuming man, Goullet was, to those who knew him, a lovable personality, always ready to give willing help to any who needed it. His interests were mostly with his profession; this was shown by his regular attendance at meetings of the societies of which he was a member such as the Hampstead Medical Society and the British Medical Association. He acted as honorary treasurer to the Marylebone Division from 1926 until his last illness, and was a representative of the Division since 1921 on the Council of the Metropolitan Counties Branch, serving on many of its committees. St. John's Wood has lost a representative practitioner of the older school, and there are many in that district who will remember Arthur Goullet with loving affection and will extend their sympathy to his widow and son.

P. B. S.

We regret to record the death on February 1st at Bridport of Dr. HARRY JOHN MANNING WATTS, who practised at Tonbridge from 1894 until his retirement a few years ago. He was born in 1862, the second son of William Manning Watts of Belsize Park, Hampstead, and received his medical education at St. Bartholomew's Hospital, where, after qualifying as M.R.C.S., L.R.C.P. in 1886, he served as house-surgeon and assistant chloroformist. He then became junior assistant medical officer at the Gloucester County Asylum, and was for some time resident medical officer in charge of the Grimsby Cholera Hospital. During his many years of general practice at Tonbridge Dr. Watts gained the affection and esteem of all his colleagues, and in his quiet and unselfseeking way did much to bind the local profession together. After the opening of the cottage hospital his services as anaesthetist were much in demand. He had been a member of the British Medical Association since 1890, and his standing among the practitioners of the neighbourhood was reflected in his election as chairman of the Tunbridge Wells Division in 1926–7. He was a competent and very conscientious doctor and a good friend to all his patients. As police surgeon his fair and clear-cut evidence made a most favourable impression in the magistrates' court and at assizes.

We regret to announce the death on February 2nd of Dr. HENRY FRANCIS LANCASTER, who had been a member of the British Medical Association for more than fifty-three years. Born in 1853, he became a student at Guy's Hospital, was prizeman in the three years 1872–4, and obtained the diplomas M.R.C.S., L.R.C.P. in 1875. Five years later he graduated M.D.Brussels with distinction. At Guy's Hospital he had held the posts of house-physician, house-surgeon, and obstetrical resident. Later he specialized in anaesthetics, and was for many years anaesthetist to the hospital, being elected to the consulting staff on his retirement from active duty. Dr. Lancaster had held a commission in the Territorial Force, and was a churchwarden of Holy Trinity Church, Bishop's Road, Paddington, for thirty-four years.

The following well-known foreign medical men have recently died: Dr. EDWARD DIX FISHER, emeritus professor of neurology in the Bellevue Hospital Medical College, aged 88; Dr. CORNELIUS GODFREY COAKLEY, oto-laryngologist to the Presbyterian Hospital, New York, and author of *Diseases of the Nose and Throat*, aged 72; Professor B. LANGE, director of the Clinic of Orthopaedic Surgery at Stuttgart, aged 70; Dr. FRITZ LUSCHER, professor of oto-rhino-laryngology at Berne, aged 72; Dr. GAETANO AJELLO RABRONI, professor of obstetrics and gynaecology at the Faculty of Medicine of Rome; and Dr. VICTOR ROCHET, honorary professor of the Faculty of Medicine of Lyons, aged 75.

Medico-Legal

MANSLAUGHTER BY ILLEGAL OPERATION

Medical Man Sentenced to Five Years' Penal Servitude

At Liverpool assizes on February 8th, before Mr. Justice Singleton, after a trial lasting for five days, Dr. Samuel Ramsay Sibbald, aged 56, of Aintree, Liverpool, was found guilty of the manslaughter of Winifred Lettice Falconer, a married woman, by performing an illegal operation, which resulted in her death. He was found "Not guilty" on a charge of murder. The judge, in passing sentence of five years' penal servitude, said he did not think the jury could have come to any other verdict, and he could not conceive of any worse case of its kind.

Dr. Sibbald having pleaded "Not guilty," Mr. R. K. Chappell, K.C., in opening the case for the Crown, said that it had been laid down by a great authority that when a person performed an illegal operation, if he must, as a reasonable man, have contemplated death or grievous bodily harm as likely to result, then, if death did result, he would be guilty of murder; but if, as a reasonable man, he could not have contemplated such result, he would be guilty only of manslaughter.[1] The prosecution submitted that when the medical evidence had been heard the jury would come to the conclusion that Dr. Sibbald must have contemplated that death or grievous bodily harm might follow. On a day in November last, after certain conversations, Mrs. Falconer went to a house occupied by a Miss Morgan, and the doctor was left alone with her there. Her condition afterwards became grave, and her mother insisted on a specialist being called in. Dr. H. C. W. Nuttall was summoned, and advised her removal to a nursing home, where she died. In the opinion of Professor J. H. Dible of the department of pathology, Liverpool University, who made a post-mortem examination, considerable and excessive force must have been used to cause the condition he found. It was also alleged that before going into the house where the operation took place Mrs. Falconer handed a sealed envelope to Miss Morgan, who gave it to Dr. Sibbald. It was stated to contain £70, which he shared with Miss Morgan. Miss Morgan, in evidence, stated that she had no nursing or medical qualifications, and her house was not a nursing home in any sense of the word.

Counsel for the Crown asked that further evidence for the prosecution might be called, tending to show that the accused had performed illegal operations on three other women at the same house and for reward, and that, in fact, he was a professional abortionist. The judge ruled that this further evidence might be admitted, and Miss Morgan thereupon testified as to three other women who had stayed at the house, and each of them handed over some such sum as £40 or £50, which she shared with the doctor. A waitress gave evidence that Dr. Sibbald performed an operation on her for which she paid £30 to him and £25 to Miss Morgan. Dr. A. A. Gemmell, who gave evidence as to the condition of one woman, not the one mentioned in the charge, agreed with the judge that a competent practitioner, if minded to bring about a miscarriage, might expect to do so without endangering life or causing grievous bodily harm; an operation to put an end to pregnancy was sometimes performed under proper medical guidance because of the state of health of the patient, but it should certainly be done by two doctors, one to give the anaesthetic, and under proper nursing conditions.

Dr. Sibbald, in evidence, said that he qualified in 1900, took the M.D. of Edinburgh University in 1905, and was medical examiner to the Shipping Federation. He had had great experience of gynaecological work, and used to attend 250 confinements a year. He was introduced to Miss Morgan by a former patient, and visited her socially and professionally, and she told him that she was prepared to receive an occasional patient. He denied ever receiving any money from her. He had received nothing like the amounts mentioned in the cases; in the case of Mrs. Falconer he asked for and received only £15. She told him that something was seriously wrong with her as the result of shock following a motor accident, and on examination he considered the case one of placenta praevia, and eventually felt that it was dangerous to let the pregnancy go on.

[1] The case counsel had in mind was probably that of *R. v. Lumley*, 1912 (22 Cox, 635), in which Mr. Justice Avory directed the jury in the sense indicated.

Evidence for the defence was given by Mr. Percy Malpas and Dr. Morris Datnow, gynaecologists, but neither of them had seen the deceased, and they could only say that, given the condition that Dr. Sibbald described, his treatment was not improper, but Mr. Malpas agreed that it was neither wise nor proper to do it single-handed, and with no nurse or nursing facilities, and Dr. Datnow said the same, though in certain exceptional circumstances the condition of the patient might leave the doctor no alternative.

Mr. Justice Singleton, in summing up, said that he dealt with the case of Mrs. Falconer alone, though other cases had been mentioned. The case was a most important one from the point of view of the man in the dock and that of the public welfare. The danger of interference with pregnancy could not be too well known, nor the risks that people ran who took part in illegal or improper interference.

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

Mr. R. I. N. Greaves has been appointed University Demonstrator in the Department of Pathology, and Dr. J. D. Boyd and Dr. R. S. Handley University Demonstrators in the Department of Anatomy. The General Board has appointed Dr. Eric Holmes a member of the Committee for the Natural Sciences Tripos until October 1st, 1937.

The title of the degree of B.Chir. has been conferred by diploma on Mrs. H. E. Dimsdale of Girton College.

Congregations will be held during the present term on Saturday, March 2nd, and Friday, March 15th, at 2 p.m.

At a congregation held on February 9th the following medical degrees were conferred:

M.B., B.CHIR.— T. C. Maling, C. C. Morgans.

M.B.—T. O. Garland, D. Kyle, G. T. Hindley, J. Smart, G. W. Willcox, R. H. Foster.

B.CHIR.—J. H. Moseley, R. H. Dale, J. S. Ross.

The following candidates have been approved at the examination indicated:

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY.—*Part I:* J. L. Dobbie, T. P. Eustace, A. H. Gibson, D. Glass, P. R. Goodfellow, T. A. Green, B. T. Hooper, W. G. S. Hopkirk (distinction), A. S. Johnstone, Z. J. Joseph, A. H. Jowell, H. Jungmann, D. W. Lindsay, D. F. MacDonald, J. W. McLaren, D. R. McPherson, S. N. Mukerji, H. S. Rassim, E. J. Rowbotham, N. C. Sinha, A. D. Versteegh, Beatrice M. Willmott, C. W. B. Woodham, Dorothy E. Wright.

UNIVERSITY OF LONDON

The following have been recognized as teachers of the University in the subjects indicated in parentheses:

St. Thomas's Hospital Medical School: Dr. Hector K. Goadby (Medicine).

London Hospital Medical College: Dr. William Evans (Medicine).

King's College Hospital Medical School: Mr. William I. Daggett (Oto-rhino-laryngology).

Royal Dental Hospital of London School of Dental Surgery: Mr. Louis E. Claremont, M.R.C.S., Mr. Frank Coleman, M.R.C.S., and Mr. Arthur L. Packham, M.R.C.S. (Dental Surgery).

The Senate on January 23rd resolved to institute, in accordance with the Regulations on University Titles (*Calendar*, 1934–5, pp. 246–56), a University Readership in Morbid Anatomy tenable at the British Post-Graduate Medical School.

The regulations in medicine for internal students (*Red Book*, 1934–5, p. 203) were amended by the deletion of paragraph 4 (iv) of the section headed "Exemptions," and the substitution therefor of the following:

Students who have passed the B.Sc. (Special) Examination in Physiology with first or second class marks or who have obtained first or second class marks in Physiology as a subsidiary subject at the B.Sc. (Special) Examination will be exempted from Physiology at the Second Examination for Medical Degrees, Part II. Students who have passed the B.Sc. (General) Examination with first or second class marks in Physiology will be similarly exempted from Physiology at the Second Examination for Medical Degrees, Part II.

The regulations relating to the First Examination for Medical Degrees and the Second Examination for Medical Degrees, Part I, were amended by the addition under the heading "Practical Examination" (*Blue Book*, September, 1934, pp. 250 and 254), and under the heading "Practical Work" (*Red Book*, 1934–5, pp. 205 and 211), of the following note:

(Candidates are permitted to bring for use in the practical examination any book or books they wish, including their own laboratory notebooks.)

The regulations for the M.D. degree, Branch III, were amended by the omission of the second sentence of the relevant footnote (*Red Book*, 1934–5, p. 224; *Blue Book*, September, 1934 p. 267) and by the substitution therefor of the following:

No list is published of approved institutions in connexion with the subjects (*c*) Neurology, (*d*) Psychoneuroses and Early Psychoses, and (*e*) Mental Retardation and Delinquency, but prospective candidates should forward to the University details of the practice which they propose to attend in these subjects in order that they may ascertain whether their proposals will satisfy the requirements.

The regulations in medicine for external students were amended by the deletion of paragraph 4 (ii) (*Blue Book*, September, 1934, p. 247) of the section headed "Exemptions," and the substitution therefor of the following:

In cases approved by the University, students who have passed the B.Sc. (Special) Examination in Physiology with first or second class marks or who have obtained first or second class marks in Physiology as a subsidiary subject at the B.Sc. (Special) Examination will not be required to pass the Physiological portion of the Second Examination for Medical Degrees, Part II. Students who have passed the B.Sc. (General) Examination with first or second class marks in Physiology will be similarly exempted from Physiology at the Second Examination for Medical Degrees, Part II.

The regulations relating to the Diploma in Clinical Pathology for external students (*Blue Book*, September, 1934, p. 323) were amended by the deletion of subsection (*c*) of the section headed "Qualifications for Admission," and by the substitution therefor of the following:

(*c*) be registered as an External Student for the Diploma in Clinical Pathology not less than six months prior to the last date of entry to the Examination.

Mr. H. L. Eason has been reappointed representative of the University on the General Medical Council, and Professor W. W. Jameson has been appointed representative of the University at the forty-sixth health congress and exhibition of the Royal Sanitary Institute at Bournemouth in July.

The University Medal at the M.D. Examination, Branch I, for Internal and External Students, December, 1934, has been awarded to Cyril George Barnes (St. Mary's Hospital); and the University Medal at the M.S. Examination, Branch III, for Internal and External Students, December, 1934, to Lewis Herbert Savin, M.D. (King's College and Westminster Hospitals).

Lectures

A lecture on "Recent Views on Megalocytic Anaemias" will be given by Dr. John F. Wilkinson at Middlesex Hospital Medical School on March 26th, at 5.30 p.m. The chair will be taken by Dr. C. E. Lakin.

A course of two lectures on "The Importance of the Veterinary Profession in Public Health Administration" will be given by Major D. S. Rabagliata at the Royal Veterinary College on Thursdays, February 28th and March 7th, at 5.30 p.m. At the first lecture the chair will be taken by Professor W. W. Jameson. Admission free.

Applications for grants from (1) the Dixon Fund, for assisting scientific investigations, and (2) the Thomas Smythe Hughes and Beaverbrook Medical Research Funds, for assisting original medical research, must be sent in between April 1st and May 15th. Particulars can be obtained from the Academic Registrar.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE

Mr. R. J. Willan, M.S., F.R.C.S., lecturer in surgery at the University of Durham College of Medicine, Newcastle-on-Tyne, has been elected to the chair of surgery, in succession to Professor G. Grey Turner, who has been appointed Emeritus Professor of Surgery.

UNIVERSITY OF SHEFFIELD

At a meeting of the University Council held on February 8th, it was reported that Sir Charles Clifford had made a generous offer to the University to meet the needs of the Dental Department. He proposed to present the property in Glossop Road, recently occupied by Sister Tait's Nursing Home, which would provide accommodation for all the dental work at present done in the University, with ample space for future developments of that work. It would also afford provision for the clinical part of the dental course, and thus give the University a self-contained dental school and dental hospital, in which the complete training of dental students could be given. Further, Sir Charles proposed to give an endowment of £5,000 towards the upkeep of the school. The council passed a resolution conveying its best thanks for this generous offer, which the council gratefully accepted.

The council received the resignation by Professor H. W. Florey of the chair of pathology, on his appointment to the chair of pathology at Oxford. The council accepted the resignation with regret, and accorded its thanks to Professor Florey for his services to the University.

The council decided to institute a lectureship in anaesthetics.

Degree congregations will be held on June 29th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

Primary Fellowship Examination

In July, 1933, the council appointed a committee to consider the scope and method of conducting the Primary Examination for the Fellowship.

After long and careful deliberation the council has now decided to make no alteration in the subjects of the examination, which will therefore be anatomy and physiology as hitherto.

CONJOINT BOARD IN SCOTLAND

The following candidates, having passed the requisite examinations, have been admitted L.R.C.P.Ed., L.R.C.S.Ed., L.R.F.P. and S.Glas.:

A. H. Ahmed, B. R. Alderson, R. Alexander, K. Bach, L. Badler, A. Beselau, B. Brecher, R. G. Buxton, S. Cohn, B. F. Coutts, J. A. Crawford, T. Crawford, M. Demant, W. Dykes, A. Elkeles, W. Emanuel, M. Fleischer, A. T. MacM. Glen, T. Goldschmidt, F. Gugenheim, de Haas, F. Himmleweit, B. D. Holt, W. J. Israel, C. B. Jones, H. Katzev, Micha L. Kohnstam, P. Kohnstam, H. Korte, M. Krayn, H. H. Landau, H. Lauber, Hilde Leven, W. Levy, W. Lipschitz, R. S. Mackinnon, S. Mannes, E. May, N. Mukerji, G. Neuman, K. Phillipsberg, L. Rau, E. F. Rosendahl, Katherina Rosenkranz, H. J. T. Ross, H. Russell, W. Selig, E. J. Simon, R. Sol'enberger, R. Schneider, E. Sommer, G. G. Watt, K. Weisner, T. C. White.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

A quarterly meeting of the Royal College of Physicians of Edinburgh was held on February 5th, with the president, Dr. Edwin Bramwell, in the chair.

Dr. William Lindsay Kinnear (Dundee), Dr. John Burnett King (Edinburgh), Dr. John Alastair Bruce (Edinburgh), Dr. David Kennedy Henderson (Edinburgh), and Dr. Robertson Fotheringham Ogilvie (Edinburgh) were introduced, and took their seats as Fellows of the College. The Parkin Prize was awarded to Dr. W. G. Aitchison Robertson.

The Services

HONORARY SURGEON TO THE KING

Lieut.-Colonel J. M. Weddell, R.A.M.C., has been appointed Honorary Surgeon to the King and promoted Brevet Colonel, vice Colonel A. C. H. Gray, O.B.E., late R.A.M.C., retired.

DEATHS IN THE SERVICES

Colonel Charles Henry Joubert de la Ferté, Bengal Medical Service (ret.), died at Uxbridge on January 24th, aged 88. He was born on March 2nd, 1846, the son of Ferdinand Jean Joubert de la Ferté, artist, and was educated at St. Mary's Hospital. He took the M.R.C.S. in 1868, the M.B.Lond. in 1870, and the F.R.C.S. in 1872. Entering the I.M.S. as assistant surgeon on March 30th, 1872, he became surgeon lieutenant-colonel after twenty years' service, full colonel on March 31st, 1900, and retired on March 29th, 1905. He dropped the latter part of his name, de la Ferté, in 1869, but resumed it in 1906, after his retirement. His whole service was spent in civil employ in Bengal, where for many years he held the post of professor of midwifery and gynaecology in the Calcutta Medical College, and superintendent of the Eden Women's Hospital. On promotion to the administrative grade he was appointed Inspector-General of Civil Hospitals in the North-West Provinces, now the United Provinces of Agra and Oudh. After his retirement he served for some years (1906–7 and 1910–11) on the Council of the British Medical Association as representative of the Indian Medical Service.

Lieut.-Colonel Alexander Stewart Ward Young, R.A.M.C. (ret.), died on December 2nd, 1934, aged 81. He was born at Redland, Bristol, on February 14th, 1853, educated in the Bristol Medical School, and took the L.S.A. and the L.F.P.S.G. in 1877. Entering the Army as surgeon on August 4th, 1878, he became lieutenant-colonel after twenty years' service, and retired on November 2nd, 1898.

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons this week read the Government of India Bill a second time, and dealt with the Unemployment Assistance (Temporary Provisions) Bill. A vote of censure against the Government in respect of its unemployment assistance policy was tabled by the Labour Opposition.

On February 12th Mr. Tinker presented a Bill to amend the Public Health Act, 1875, with respect to coal-mine refuse liable to spontaneous combustion.

In the House of Lords on February 6th the West Riding of Yorkshire Mental Hospitals (Superannuation) Bill was committed.

The resolution appointing a Select Committee on the Osteopaths Bill was approved. On February 7th the Lords read the Educational Endowments (Scotland) Bill a second time.

The Supreme Court of Judicature Amendment Act received the Royal Assent on February 12th.

Gymnasiums in Mental Homes

In the House of Lords, on February 5th, Lord KILMAINE moved "That all mental homes having over 100 patients should be required to include a fully equipped gymnasium in their establishment, and that the same provision should also be made in respect of the State prisons and reformatories, and county asylums." Lord Kilmaine said he was interested in this question because he had two great friends, one of whom was, and the other had been, a patient in a mental home. The life of the average patient in a mental home could best be described as one of total inertia. He did not know if in good weather the milder cases were able to take walks in country lanes, but in wet weather they had absolutely no exercise at all. If his motion were adopted it would be of immense value both to the patients and to their attendants. Many of the attendants had a most wearing time, and when they were off duty there was often nothing for them to do. He could not say whether reformatories were provided with gymnasiums, but the same considerations which he had stated applied particularly to reformatories containing young persons. Lord ADDINGTON supported the motion. He said that the only point he wished to clear up was how the suggestions in the motion could be enforced in view of the difficulty that might be found of providing the necessary accommodation in many institutions. Many, even of the county mental hospitals, were restricted for space, and many were overcrowded, particularly on the female side. If there was no room for expansion it would be difficult to provide facilities for gymnasiums. The Board of Control was pressing the need of facilities for recreation on the committees of the county mental hospitals.

Viscount GAGE, replying for the Government, said that there was no reason why local authorities should not provide the gymnastic facilities which had been suggested. The whole point was whether there was a case for compulsory legislation. Patients in mental institutions were there for definite mental treatment. Physical culture was being more and more recognized as a suitable and indeed a necessary part of their physical treatment, but it could be provided largely without apparatus of any kind. The question whether physical culture was being sufficiently used in the mental hospitals was engaging the attention of the Board of Control. There was a stronger case for physical training of mental defectives than of patients of ordinary mental hospitals, but even in those institutions conditions were not the same all over the country. The Government was in sympathy with Lord Kilmaine's motion, but felt that it would not be right to put the State and the ratepayers to expenditure when there was no evidence that the medical officers wished for the equipment which had been suggested, or that the local authorities were not properly using the powers which they possessed. In the great majority of the approved schools, formerly called reformatories, there was full or partial gymnastic equipment. In Borstal institutions the provision of efficient physical and gymnastic training had always been recognized as an essential part of the treatment of young persons sent there. The Home Secretary fully appreciated the importance of physical training for the inmates under his care, and the matter had the full attention of the Prison Commissioners. Lord KILMAINE said that after Lord Gage's speech he would ask leave to withdraw his motion. He pointed out that he did not visualize any expenditure by the State. He was thinking of two mental homes which charged very high rates indeed to the relatives of the unfortunate people under their care, such as £600 of £800 each a year. They were money-making concerns; they were a syndicate, and could perfectly well afford out of their own pockets to put a gymnasium at the disposal of the patients.

The motion was withdrawn.

Committee on Coroners' Duties

Replying to Mr. Leckie, on February 6th, Sir JOHN GILMOUR said that the terms of reference of the committee to be set up to consider the question of coroners' duties had not been finally determined. They would be sufficiently wide to admit consideration to the suggestion of limiting coroners' powers to determining the cause of death without attempting to allocate responsibility.

Ministry of Pensions Hospitals

Major TRYON gave Mr. T. Smith, on February 7th, the following particulars concerning Ministry of Pensions hospitals:

Name	Where Situated	Equipped Bed Strength	Medical Officers		Nursing Staff
			Whole-time	Visiting	
Chapel Allerton...	Leeds	157	2	4	23
Chepstow	Monmouthshire	140	2	—	8
Cosham	Portsmouth	285	4	—	10
Dunston Hill ...	Newcastle	120	2	1	15
Edenhall	Musselburgh, Edinburgh	103	2	2	13
Latchmere	Kingston, Surrey	20	1	—	6
Leopardstown Park	Dublin	80	2	3	10
Mossley Hill ...	Liverpool	300	4	4	32
Orpington	Orpington, Kent	170	3	—	6
Rookwood	Cardiff	86	1	2	13
Roehampton* ...	London, S.W.15	463	11	1	62

* Hospital controlled under special arrangement.

Tuberculosis Investigations in Africa

In reply to Dr. O'Donovan, on February 7th, Sir P. CUNLIFFE-LISTER said the investigations of Dr. Allan, Captain Burrows, and Drs. Matthews and Wilcocks into tuberculosis in Africans were undertaken in consultation with the Colonial Office. The reports of Dr. Allan and Captain Burrows, while of general interest in the problem of tuberculosis in Africa, did not relate to territories dealt with by the Colonial Office. As regards the report of Dr. Matthews on tuberculosis in Zanzibar, the local Government had given full consideration to the recommendations put forward. A tuberculosis clinic was established in Zanzibar township, two new tuberculosis wards were built at Welezo Infirmary, and special accommodation for tuberculosis cases was provided at the general hospital. Arrangements had also been made for the establishment of a home treatment service. The number of deaths notified in Zanzibar town as due to tuberculosis fell from 185 in 1923 to fifty-two in 1933. Dr. Wilcock's report was in the nature of an interim report on an investigation begun in 1931 and financed from the Colonial Development Fund. An application had been submitted by the Tanganyika Government for the grant of further assistance from the Fund to

enable the investigation to be continued until May, 1937, on the lines indicated by Dr. Wilcocks. The Tanganyika Government was alive to the importance of taking measures against the disease. Special instructions had been issued to all medical officers, administrative officers, schools, missions, and native authorities to check its spread and to bring home to all concerned the danger it presented.

Indian Health Services under New Bill

The House of Commons read the Government of India Bill a second time on February 11th by 404 to 133. During that day's debate Mr. WINSTON CHURCHILL said the first ten years of the Montagu-Chelmsford reforms showed a marked deterioration in the transferred social services. To remedy this a portion of the money available for the Provincial Governments should be meted out to them, with a system and inspectorate, to ensure there was not a grave administrative breakdown or decline in the provinces. The DUCHESS OF ATHOLL said the power of making grants, with or without inspectors, would mean that something could be done to advise and guide provincial ministers. Sir FRANCIS FREMANTLE considered this power was given under Section 140 of the Bill. Mr. BALDWIN stated that nearly all the problems affecting the daily lives of the Indian people and the practical questions of social reform arose in the provincial sphere. The British Government was largely precluded from dealing with these questions, because they were rooted in the religious practices of the people. The British in India had built up a system for the relief of famine and prevention of disease, had organized veterinary services, and developed institutions for education and research. The value of these services was so well realized in the minds of Indians that they would not voluntarily let them depreciate, nor deprive themselves of the help which would still be available for their maintenance and expansion. The House must not expect that in all these services the standards attained under British direction would be reached in a moment. The growth of population stimulated by the British improvement in the health services and by British measures for dealing with pestilence would continue to press harder on the means of subsistence. India was reaching the point, if she had not reached it, when nothing could avail but profound changes in deep-seated customs and habits of thought, which the British could not touch, because they had their sanction in religion. These were matters with which Indians alone could deal.

Benefit of Unemployed Women during Pregnancy

On February 11th Mr. GROVES asked the Minister of Health whether his attention had been called by the West Ham Insurance Committee to the present circumstances of unemployed pregnant insured women in relation to the benefits of national health and unemployment insurance; whether he was aware that the experience of local Insurance Committees was to the effect that insurance medical practitioners and others had reported cases in which unemployed pregnant women, fully insured under the national health and the unemployment insurance schemes, through the interpretation of the regulations and rules, had failed to obtain the cash benefit of either during part of the term of pregnancy although in fact entitled to the benefit of one or the other; and whether he would, in collaboration with other Government departments, devise a scheme for the removal of the hardship from which these insured women suffered. Mr. SHAKESPEARE replied that the Minister's attention had been called to the statement of the West Ham Insurance Committee. He was having inquiries made into the matter, and would communicate with the hon. member as soon as they were completed.

Housing Bill in Committee

A Standing Committee of the House of Commons began consideration, on February 12th, of the Government's Housing Bill, which deals with overcrowding.

On Clause 1, which provides that local authorities shall prepare and submit a report on overcrowding in their areas before a date to be fixed by the Minister of Health, Sir PERCY HARRIS moved that the reports should be submitted within six months after the passing of the Bill. He said that if the Bill meant anything, and if there was to be a real attack on overcrowding, the committee ought to state definitely when the information relating to overcrowding should be available. Almost every medical officer at present could give very full figures as to overcrowding within his district. Sir F. FREMANTLE characterized the amendment as indefinite. The committee, he said, would agree that six months ought not to elapse before the survey of overcrowding was begun, but it would be impossible to declare that it must be carried out by all local authorities, large and small, within the time proposed in the amendment. While words might be inserted requiring local authorities to begin the survey, practically forthwith, the Minister of Health should be left with the power to get a drive on. Mr. GREENWOOD expressed the hope that the Minister would make a concession by fixing a date for the completion of the survey, as that would determine when the measure was actually brought into operation. Sir HILTON YOUNG said he would give the assurance, with the greatest certainty and clearness, that it was the intention of the Government that the survey should be carried out in the shortest possible time. He would have accepted the amendment if he had thought it would be effective for the purpose of securing the swifter and more efficient working of the Bill, but he did not think it would do so. The Bill covered all kinds of local authorities, whose tasks in relation to housing were of different magnitudes. There was so much variety that it was impossible to find a yard-stick to cover them all. To fix a limit of six months for a completion of the survey would be to fix too long a limit for small areas. It was essential that the Minister should have power to fix each stage of the processes specified in the clause. To deprive him of the power of fixing a maximum period would be to take a powerful weapon out of his hands.

The amendment was negatived by 39 votes to 9.

Captain ELLISTON moved an amendment providing that the survey of overcrowded houses should also cover houses unfit for human habitation. Sir HILTON YOUNG, while sympathizing with the proposal, said that a large part of the purpose behind it would be achieved under the Bill. The survey would, no doubt, produce a great deal of valuable information with regard to unfit habitations, but it would be a mistake to insert the amendment, because it would delay the survey unnecessarily.

The amendment was negatived.

Sir P. HARRIS moved another amendment to ensure that the houses provided to abate overcrowding should be "suitable" to the means of the persons for whom they were intended. Otherwise, he said, overcrowding would continue in areas where there was apparent building activity. Sir HILTON YOUNG stated that the Bill secured that the accommodation of the new dwellings would be appropriate to the means of the intended tenants.

The amendment was negatived by 41 votes to 8.

The committee adjourned until Tuesday, February 19th.

Lead Poisoning: Increased Incidence.—On February 4th Sir JOHN GILMOUR, replying to Major Hills, said that during 1934 there were fifteen newly reported cases of lead poisoning among women in the pottery industry. This was the highest figure for several years. Particulars indicated that the rise was due to a boom in the manufacture of coloured tiles. This had led to the starting of new works, where neither the management nor the workers had experience of the high standard of cleanliness necessary. Attention was drawn to the matter in the chief inspector's report for 1933. So far from relaxing vigilance, the inspectors had been devoting special attention to securing improved standards of care.

Road Conveyance of Corrosive Acid.—Sir JOHN GILMOUR, on February 4th, told Major Hills that draft regulations had been prepared dealing with the conveyance by road of corrosive acids. These were at present the subject of consultation with interests affected. The matter was one of complexity, but all possible steps were being taken to expedite a decision.

Influenza in Scotland.—On February 5th Mr. SKELTON informed Dr. W. H. McLean that local authorities in Scotland from time to time took steps, by Press notices and otherwise, to draw the attention of the public to the existence of an epidemic of influenza, and to indicate the precautionary

measures which should be taken. The Department kept itself informed of the action so taken by local authorities. He was considering what, if any, further steps could usefully be taken in the matter.

Milk-in-Schools Scheme in Scotland.—Mr. SKELTON, replying on February 5th to Mr. Anstruther-Gray and Mr. Leonard, said that thirteen education authorities in Scotland were already operating the milk-in-schools scheme. Nearly 200,000 children were receiving milk under the scheme, and that number was expected rapidly to increase. In ten areas it had been decided to provide milk, but final arrangements had not been completed. In six areas the matter was still under consideration by the authorities, and there were eight areas which were not yet covered by schemes made by the Milk Marketing Board. The approved Milk Marketing Board schemes applied to schools and to junior instruction centres but as yet no juveniles in Scottish junior instruction centres were receiving milk.

Medical Examination of Claimants for Pensions.—Mr. J. C. M. GUY, on February 5th, asked the Minister of Pensions if he would make the necessary arrangements for the appointment of a medical or surgical expert, resident in Scotland, in all Scottish cases that were remitted for the consideration of an independent medical specialist in which a medical examination of the claimant was considered necessary. Major TRYON replied that the arrangements already in force provided that, if in any case the independent medical expert consulted by the Ministry considered that a further medical examination was necessary, such examination could be carried out either by himself or by another medical man in accordance with his wishes.

Deaths in Road Accidents.—On February 5th Major DAVIES told Mr. Thorne that in 1926 4,886 persons were killed on the roads in Great Britain. In 1927 5,329 persons were killed; in 1928, 6,138; in 1929, 6,696; in 1930, 7,305; in 1931, 6,691; in 1932, 6,667; in 1933, 7,202; and in 1934 (provisional), 7,273.

School Children receiving Free Meals and Milk.—In reply to Sir W. Jenkins, on February 7th, Mr. RAMSBOTHAM said the number of children attending public elementary schools in England and Wales who received ordinary meals under arrangements made by local education authorities was about 108,000, of whom approximately 98,000 received them free. These children had not in all cases been certified by the medical officer to be in need of the meals. The basis of selection had hitherto varied considerably in different areas. The number of breakfasts represented about 12½ per cent. of the number of dinners, and the number of teas about 5 per cent. The average cost per meal was about 4d. Meals were usually given on five days a week only. Some authorities provided meals also on Saturdays, or on Saturdays and Sundays. About 200,000 children in public elementary schools received free milk under arrangements made by 151 local education authorities in England and twenty in Wales. The number of children who received milk because they had been certified by the medical officer to be in need of supplementary nourishment could not be stated, as the method of selection had hitherto varied. The cost of the milk under the Milk-in-Schools Scheme was ½d. for a third of a pint. Some children received a third of a pint daily, and others two-thirds of a pint or one pint. The number of children receiving malt and cod-liver oil was not available. These were given in some areas as part of the authority's arrangements for the provision of meals, and in others as a form of medical treatment under Section 80 of the Education Act, 1921. No figures showed the number of local education authorities in England and Wales which had permission from the Board of Education to institute dining halls and cooking facilities to provide a hot meal for children in elementary schools. Where the need for dining accommodation in a new public elementary school was shown, the Board was prepared to consider proposals for its provision.

Medical Attention after Flogging.—Replying to Mr. Atlee, on February 7th, Sir JOHN GILMOUR said that in only one case had it been necessary, after a flogging with the "cat" administered in prison, to keep the prisoner who had been flogged under medical observation. At no time was it necessary to admit the prisoner to hospital. Records of the last ten years had shown no similar case in that period.

Influenza Outbreak in France.—Replying to Major Despencer-Robertson, on February 7th, Sir HILTON YOUNG stated he was aware of the outbreak of a virulent type of influenza in France, but was advised that there were no known practicable means whereby the spread of influenza from one country to another could be prevented. There were, therefore, no effective steps he could take to lessen the chance of infection spreading to this country.

Cleaner Milk Regulations.—Mr. RHYS DAVIES, on February 11th, asked the Minister of Health if it was proposed to initiate legislation or issue regulations with a view to securing a cleaner milk supply. Mr. SHAKESPEARE replied that detailed regulations for securing the production and distribution of clean milk were already contained in the Milk and Dairies Order of 1926, and it was not proposed at present to introduce legislation or to issue further regulations for this purpose. The question of the steps to be taken to secure a safer milk supply was under consideration in connexion with the recommendations made on this subject in the recent report of the Cattle Diseases Committee of the Economic Advisory Council.

Imported Eggs: Bacteriological Examination.—Mr. SHAKESPEARE informed Sir P. Hurd, on February 11th, that the Minister of Health had no evidence about the sanitary conditions under which eggs from China were produced and prepared for market, but such eggs were subject to examination at the ports of entry, and were liable to seizure and condemnation if found to be unsound or otherwise unfit for human consumption. It was, further, a requirement that imported eggs should be free from preservatives. The Minister was not aware of any instance in which disease-producing organisms had been found in imported eggs, but he proposed to arrange for a special bacteriological examination of some samples of these eggs.

Maternity Accommodation in the Rhondda Area.—Mr. MAINWARING, on February 12th, asked the Minister of Labour whether, in view of the present lack of accommodation in the Rhondda area for maternity cases, and the large number requiring and awaiting treatment and care, he could hold out any hope of a money grant being made available from the depressed areas fund by way of enabling the responsible authority to make provision for adequate accommodation. Mr. OLIVER STANLEY replied that this was a matter which the Commissioner was prepared to consider, though he could not, of course, undertake that a grant would be made.

Progress in Slum Clearance.—On February 12th Mr. SHAKESPEARE, replying to Sir Geoffrey Ellis, said that the net progress made during January in the slum-clearance campaign was as follows: clearance areas were declared comprising 4,995 houses; clearance or compulsory purchase orders were made covering 3,692 houses; clearance or compulsory purchase orders were confirmed covering 4,963 houses; and re-housing was approved to the extent of 5,946 houses. On February 12th Mr. Shakespeare informed Sir W. Davidson that Section 6 of the Housing Act, 1925, empowered local authorities to make by-laws in relation to houses let in lodgings or occupied by members of more than one family. Those powers were adequate to prevent such houses becoming the slum problem of the future.

Extravagance in Panel Prescriptions.—On February 12th Mr. THORNE asked the Minister of Health what instructions had been issued to panel doctors relative to the extravagant use of medicines prescribed for their panel patients; if he could state the number of doctors who had been warned for not giving satisfactory explanations, and the counties in which they resided; and what action he proposed to take in the matter if the warnings were ignored. Mr. SHAKESPEARE replied that the Minister of Health had no power to issue instructions, but from time to time insurance practitioners generally were reminded that they should avoid extravagance in prescribing. They were, of course, required by their terms of service to order any drugs reasonably necessary for the adequate treatment of their patients. During 1934 a special warning was issued in five cases, which arose in the administrative areas of London, Middlesex, Lancashire, Kent, and Salford.

Durham University.—The Prime Minister announced that the report of the Royal Commission on Durham University was expected towards the end of February.

Medical News

The Gold Medal and Prize for 1934 given by the British Orthopaedic Association in memory of Sir Robert Jones has not been awarded.

The annual dinner of the Medical Superintendents' Society will be held at the Langham Hotel, Portland Place, W., at 7.30 p.m., on Saturday, March 23rd.

At the dinner meeting of the Chelsea Clinical Society at Hotel Rembrandt, Thurloe Place, S.W., on Tuesday, February 19th, there will be a discussion on "The Therapeutic Uses of Gold."

A Chadwick Public Lecture entitled "A Hundred Years of Public Health Administration," will be given at Manson House, 26, Portland Place, W., by Mr. William A. Robson, Ph.D., B.Sc., on Monday next, February 18th, at 5.15 p.m., with Sir William J. Collins in the chair. At 5 o'clock the Chadwick Army prize and gold medal will be presented to Colonel W. P. MacArthur, on the introduction of Lieut.-General J. A. Hartigan, Director-General, Army Medical Services. Further information concerning Chadwick lectures may be obtained of the secretary, Mrs. Aubrey Richardson, 204, Abbey House, Westminster, S.W.

The Minister of Health will preside at a meeting of the Royal Society of Arts, John Street, Adelphi, W.C., on Wednesday, February 20th, at 8 p.m., when a lecture on "Water Supplies from Underground Sources" will be given by Lieut.-Colonel J. D. Restler.

Dr. R. R. Marett will deliver the presidential address before the Institute of Sociology on Friday, February 22nd, at 8.15 p.m., when his subject will be "Race and Society"; the Lionel Tayler Memorial Lecture on "The Mental Difference between Individuals" will be given by Dr. Cyril Burt on Wednesday, February 27th, at 8.15 p.m. Further information regarding the activities of the Institute can be obtained from the general secretary at Le Play House, 35, Gordon Square, W.C.

The annual general meeting of the Institute of Hospital Almoners will be held on Thursday, February 21st, at 6 p.m., in the Westminster Palace Rooms, 44, Victoria Street, S.W. An address will be given by Sir Walter Langdon Brown, Regius Professor of Physic, University of Cambridge.

"The Examination of Tinned Foods," and the "Legislative Control of Milk Supplies and its Problems," are the subjects to be discussed at a meeting of the Royal Sanitary Institute at the Municipal Buildings, Plymouth, on Friday, February 22nd, at 5.15 p.m. The discussions will be opened by Dr. W. S. Walton and Dr. J. L. Dunlop respectively.

A discussion on "The Problems of Rural Water Supply" will be opened by Colonel C. H. H. Harold and Mr. R. G. Hetherington at a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine, on Friday, February 22nd, at 8.30 p.m.

A meeting of the Royal Microscopical Society will be held at B.M.A. House, Tavistock Square, W.C., on Wednesday, February 20th, at 5.30 p.m., when Dr. D. M. Wrinch will open a discussion on "Chromosomes and their Structure."

The winter conversazione of the University of London Medical Graduates' Society will be held at British Industries House, Marble Arch, W., on Thursday, February 28th, at 4.30 p.m. The programme will include medical films. Medical graduates of the University of London are invited to apply for tickets to the honorary secretaries of the society, 11, Chandos Street, Cavendish Square, W.1, before February 23rd.

The Fellowship of Medicine (1, Wimpole Street, W.) announces that a demonstration on tumours of the stomach will be given at the Wellcome Museum of Medical Science on February 21st at 3 p.m.; and on February 28th there will be a lecture on tuberculosis. Forthcoming courses include: a clinical and pathological M.R.C.P. course, at the National Temperance Hospital, on Tuesdays and Thursdays at 8 p.m., from February 19th to March 9th; a special M.R.C.P. course in chest diseases, at the Brompton Hospital, from March 5th to 29th; medicine, surgery, and the specialties, at the Prince of Wales's General Hospital, from February 25th to March 9th; week-end courses in children's diseases, at the Princess Elizabeth of York Hospital for Children, March 2nd and 3rd; clinical surgery, at the Royal Albert Dock Hospital, March 9th and 10th; and chest diseases at the Brompton Hospital, March 23rd and 24th. A week's course in clinical medicine will be given at the National Temperance Hospital from March 14th to 20th (including the Saturday and Sunday). Courses, demonstrations, lectures, etc., arranged by the Fellowship, are open only to members and associates.

The next course of post-graduate lectures and demonstrations on medical, surgical, and special subjects, given by the honorary staff of the Manchester Royal Infirmary, will open on Tuesday, February 19th, and will continue each week (with the exception of April 23rd) till June 4th. The demonstrations of clinical cases and methods in the wards and special departments, which begin on Friday, February 22nd, will be continued till Friday, May 31st (with the exception of April 19th and 26th). There is no fee, and arrangements are made for the parking of cars.

The London Irish Medical Golfing Society held its seventh annual dinner and dance at Claridge's Hotel on February 7th, when the president, Senator Barniville, was in the chair. The captain, Mr. D. R. Wheeler, proposed the toast of "The Guests," and Mr. Ernest Miles replied. About three hundred were present, and a most enjoyable evening was spent.

The council of Epsom College will shortly award a "France" pension of £30 a year to a duly qualified medical *man* of not less than 55 years of age. If the candidate is a single man or a widower his income, independent of any allowance from the College or from the Royal Medical Benevolent Fund, must not exceed £100 per annum. Forms of application should be obtained forthwith from the secretary, Epsom College, 49, Bedford Square, London, W.C.1, and must be returned completed to him not later than April 30th, 1935.

The Manchester Child Guidance Clinic, after two years in rooms at the Workers' Educational Association's offices in Oxford Road, has now moved into more commodious premises at the Atherton Street School, off Quay Street. Dr. Leslie Chevens has resigned the posts of director and psychiatrist, and Dr. Norman Fisher, paediatrician to the clinic, is acting temporarily as director.

In memory of Lord Riddell, Lady Riddell is devoting the capital sum of £100,000, which she inherits under his will, to the building and equipment of a nurses' home and preliminary training school in connexion with St. Thomas's Hospital, where she was a nursing sister before her marriage.

A biography of Dr. Christine Murrell, the first woman to be elected to the General Medical Council, has been written by Christopher St. John, and will shortly be published by Williams and Norgate, with preface by Lady Barrett.

The January issue of the *British Journal of Tuberculosis* opens with a note by the editor, Dr. L. S. T. Burrell, explaining the changes which are being introduced in external appearance and internal policy. It has been decided to make the journal more clinical in character. To the present issue Professor Lyle Cummins contributes an article on the problem of the acute pulmonary tuberculosis of young females. There are notes by Dr. J. Gravesen, on the place of phrenicectomy in the treatment of pulmonary tuberculosis; on Christopher Bennet, by Sir Humphry Rolleston; on Assmann's focus, by Dr. Peter Kerley; on tuberculin treatment, by Dr. Halliday Sutherland; and on tuberculin in iridocyclitis and scleritis, by Mr. C. L. Gimblett. A new feature is the first of a series of "consultations"; in this Dr. R. A. Young discusses a case and gives his opinion on the best treatment.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs. Authors over-seas should indicate on MSS. if reprints are required, as proofs are not sent abroad.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBER** of the British Medical Association and the *British Medical Journal* is EUSTON 2111 (internal exchange, four lines).

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QUERIES AND ANSWERS

Lead and Opium Lotion and Ascites

Dr. C. J. G. EXLEY (Bardney) writes: I do not know if the following case illustrates a recognized form of treatment, or whether it is simply a coincidence. The patient, a woman aged 60, with a large, hard carcinoma of the uterus, developed ascites, which was so great that the question of paracentesis was being considered, when a large patch of purpura appeared on the abdominal wall. I treated this with lotio plumbi cum opio, together with calcium lactate internally, and after a few days I noticed the ascites was diminishing. After the purpura had cleared up I continued with the lotion, and after a further two weeks the ascites had completely disappeared. I thereupon suspended the lead and opium lotion, and after a few days the ascites reappeared and was as great as before. I therefore commenced with the lotion again, and the ascites once more cleared up entirely. This was over nine months ago, and there has been no trace of ascites since. Is there an explanation for this? If so, I should be glad to hear of one.

Diphtheria Carrier

Dr. DAVID M. WALKER (Strone, Argyll) writes in answer to "P. G. D.," who asks for treatment that might convert a positive into a negative swab in a "diphtheria carrier": I would suggest that the accessory nasal sinuses be investigated. I have seen one or two cases in which a persistent positive diphtheria swab has been due to chronic sinus infection.

Dr. H. FERGIE WOODS (London, W.1) writes: Minute doses of cyanide of mercury have been found to do this. The dosage naturally has to be *very* minute, and is best prescribed in one of the dilutions used in homoeopathic treatment. That known as the "twelfth potency" would be a good one to try. It could be given two or three times a day, in 3-minim doses, for, say, a week at a time.

Buccal Ulcers

Dr. FRANCIS E. PRESTON (Wanstead, London) writes in reply to "J. B. J." (February 9th, p. 288): About twelve years ago I was troubled with tiny buccal ulcers. I tried most of the textbook remedies, but without success. One that was particularly recommended was silver nitrate dissolved in spirit. aeth. nit. The use of this was extremely painful, and not effectual. A friend, who had been a sufferer, advised me to apply boric ointment. This was not so disagreeable to use as I had expected, and a few applications made a complete cure.

"M.D.Camb." writes: I recommend a pinch of finely powdered chlorate of potash, applied with a damp finger to the inflamed area on cheek or gum. It causes acute smarting for a few moments, but by the time the tears have ceased to flow the ulcer is often on the way to healing, and a second application may not be needed.

Painful Insulin Injections

Dr. O. COLVILLE (Bath) writes in reply to "R. J. C." (January 26th, p. 187): I have found with my timid patients the following method very satisfactory in effecting a painless hypodermic injection. Mark out a small spot with tr. iodi, then spray it for ten seconds (more or less) with ethyl chloride so as not to freeze the skin completely. The resistance to the needle is greater and so a sudden stab is not desirable; one rather pushes the needle steadily in.

New Cars for Old

"ANNUAL CHANGE" writes in reply to "R. L. C." (February 2nd, p. 237), who asked for opinions regarding the alternatives of changing his car each year with a small depreciation or running it till it is valueless: There are supporters for both points of view. Being strongly of the opinion that the annual change is the more economical, I give the points in favour of this method. The car is never outside of its year's guarantee; no new tyres; few punctures; good brakes; no painting; fewer rattles; fewer electric troubles due to rust; one decarbonization; no reboring; car looks fresh; upholstery, etc., and springs, cushions, etc., are more comfortable. Many can change a 7-h.p. car for £25 per year; I can change a £450 car with an annual depreciation of £100, and part of this will be allowed in income tax. For the owner with a chauffeur or who does less than 15,000 miles per year this, possibly, is not economical, but for the owner-driver who does that mileage, in my opinion it is certainly an economy in the long run.

LETTERS, NOTES, ETC.

Whooping-cough with Cerebro-spinal Symptoms

Dr. H. A. SALLAM writes from the Public Health Laboratories, Luxor, Egypt: A boy, 6 years old, was admitted to hospital as "cerebro-spinal meningitis" on January 20th. He was unconscious, with retracted neck, locked jaw, positive Kernig's sign, extensor plantar reflex, absent knee-jerks, and wide pupils reacting sluggishly to light. The cerebro-spinal fluid obtained by lumbar puncture was clear and under tension; no increase in cellular count, and sterile. Leucocytes: total 36,000, with 72 per cent. lymphocytes. On January 23rd there was almost sudden recovery, with cough. On the following few days the cough began to be troublesome, with a characteristic "whoop," and the diagnosis of "whooping-cough" was finally established. The nervous system is now perfectly normal, and the patient is progressing.

Streptococci and Scarlet Fever

"M.D." (London, N.7) writes: From clinical experience I have for a long time doubted the relative importance ascribed to the various groups of streptococci isolated by the laboratory from throats, pus, etc. "There is," it is agreed, "no line of demarcation serologically between, for example, the streptococci of scarlet fever and other haemolytic strains" (Muir and Ritchie), but the growth of a non-haemolytic streptococcus from the throat of a severe case of scarlet fever has led one to inquire as to the relationship between even the haemolytic and non-haemolytic groups. The latter is a common inhabitant of the mouth in the form of *S. salivarius*, but in scarlet fever, which is looked upon as a local infection of the throat by the *Streptococcus haemolyticus*, one would not expect it to be the predominant organism present. The infectivity of the desquamated epithelium is often called in question, and in view of the above findings it is of interest to record that during the fourth week of the illness there was cultured from a piece of desquamated epithelium from the toes a pure culture of *Streptococcus haemolyticus*.

Price of Insulin

Boots Pure Drug Company announces that from February 11th its price for insulin has been reduced from 1s. 4d. for a 5-c.cm. phial of 100 units to 1s. At the same time, the special low price charged to hospitals will be still further reduced to a level substantially below that of imported insulin.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 52, 53, 54, 55, 56, 57, and 59 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 58 and 59.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 68.